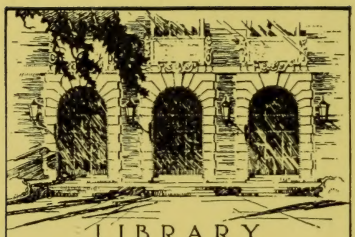

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VOL. 19 No. 11

APRIL, 1921

RALEIGH, N. C.

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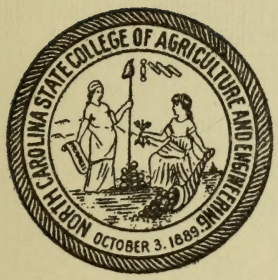
NORTH CAROLINA STATE COLLEGE
OF
AGRICULTURE AND ENGINEERING



1920-1921

STATE COLLEGE STATION
RALEIGH

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COLLEGE CALENDAR

1921

Tuesday,	June	14.	Summer School begins.
Wednesday,	July	27.	Summer School ends.
Tuesday,	September	6.	Fall Term begins. Registration days, Tuesday and Wednesday, September 6 and 7.
Thursday,	November	24.	Thanksgiving Day.
Wednesday,	December	21.	First Term ends.

1922

Wednesday,	January	4.	Second Term begins. Registration days, Wednesday and Thursday, January 4 and 5.
Tuesday,	May	30.	Commencement Day.

CALENDAR

1921

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Name	*Postoffice*	*Term Expires*
M. B. STICKLEY	Concord	March 20, 1923
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O. L. CLARK	Clarkton	March 20, 1923
W. R. BONSAL	Hamlet	March 20, 1925
D. R. NOLAND	Crabtree	March 20, 1925
CLAUDE B. WILLIAMS	Elizabeth City	March 20, 1925
CLARENCE POE, Chairman	Raleigh	March 20, 1925
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C. W. GOLD, Secretary	Greensboro	March 20, 1927
T. E. VANN	Como	March 20, 1927
P. S. BOYD	Mooresville	March 20, 1927
W. S. LEE	Charlotte	April 1, 1929
C. F. TOMLINSON	High Point	April 1, 1929
J. F. DIGGS	Rockingham	April 1, 1929
E. R. JOHNSON	Currituck	April 1, 1929

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D. R. NOLAND

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T. T. THORNE

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Vice President and Professor of Chemistry

A.B. 1883, A.M. 1885, D.Sc. 1917, Davidson College; Fellow in Chemistry 1889-1890, Cornell University

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Professor of English and Dean of the College

B.S. 1886, S. C. Military Academy; Ph.D. 1891, Johns Hopkins University

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Dean of Agriculture

B.S. 1893, M.S. 1896, N. C. State College of Agriculture and Engineering; Graduate Scholarship Student 1896-7, Johns Hopkins University

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Professor of Mathematics

A.M. 1889, Wake Forest College

THOMAS NELSON

Professor of Textile Engineering

Preston (England) Technical School

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Professor of Electrical Engineering

A.B. 1890, Certificate in Electrical Engineering 1892, Johns Hopkins University

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Professor of Horticulture

B.S. 1910, Pennsylvania State College

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Professor of Soils

B.S. 1908, University of Missouri; M.S. 1909, University of California

CARROLL LAMB MANN

Professor of Civil Engineering

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ZENO PAYNE METCALF

Professor of Zoology and Entomology

B.A. 1907, Ohio State University

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LAWRENCE EARLE HINKLE

Professor of Modern Language

B.A. 1911, University of Colorado; M.A. 1918, Columbia University

CHARLES MCGEE HECK
Professor of Physics
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Commandant
Formerly Major U. S. A.

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Lieutenant-Colonel U. S. A., Retired

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CURRIN GREAVES KEEBLE
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B.S. 1918, Georgetown College

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STEWART ROBERTSON
Instructor in English and Mathematics
Graduate 1905, Prince Wales College

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Instructor in Horticulture
Graduate 1920, New York State School of Agriculture (Morrisville, N. Y.)

JAMES KIRK COGGIN
Instructor in Vocational Education
B.S. 1920, N. C. State college of Agriculture and Engineering

MRS. CHARLES MCKIMMON
State Demonstration Agent; Assistant in Agricultural Extension

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Arthur Finn Bowen, C.P.A.
Bursar and Purchasing Agent

Talmage Holt Stafford, B.S.
Alumni Secretary

Edward S. King, A.B.
General Secretary of the Young Men's Christian Association

Harry Hartsell, B.E.
Director of Athletics

Alton Cook Campbell, M.D.
Physician

Louis Hines Harris
Steward

Mrs. Ella I. Harris
Hospital Matron

Mrs. Charlotte M. Williamson
Librarian

Mrs. Nellie Williamson Price
Dietition

Miss Isabel Bronson Busbee
Secretary to the President

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Harry Elmer Fischer, Captain Infantry, U. S. A., D. O. L., Instructor
Nathaniel Lewis Simmonds, First Lieutenant Infantry, U. S. A., D. O. L., Instructor
Charles Bagby Rickert, Warrant Officer, U. S. A., Assistant Instructor
Horace Carter Thomas, Staff Sergeant, U. S. A., Assistant Instructor
Jacob Elverson Baker, Sergeant, U. S. A., Assistant Instructor
Albert Porter Hammond, Sergeant, U. S. A., Assistant Instructor
Lawrence Hartwell Brown, Sergeant, U. S. A., Assistant Instructor

FARM DEMONSTRATION AGENTS

C. R. Hudson, State Agent, Raleigh, N. C.
H. H. B. Mask, Assistant State Agent, Raleigh, N. C.

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J. M. Gray, Mountain District, Asheville, N. C.
E. S. Millsaps, Piedmont District, Statesville, N. C.
T. D. McLean, Central District, Aberdeen, N. C.
E. W. Gaither, Eastern District, Goldsboro, N. C.
O. F. McCrary, Northeastern District, Washington, N. C.

COUNTY AGENTS

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Alamance	J. P. Kerr	Haw River
Alexander	U. A. Miller	Taylorsville
Anson	J. W. Cameron	Polkton
Avery	J. W. Goodman, Jr.	Newland
Beaufort	B. T. Leppard	Washington
Bladen	R. K. Craven	Clarkton
Buncombe	E. D. Weaver	Weaverville
Cabarrus	R. D. Goodman	Concord
Caldwell	D. W. Roberts	Lenoir
Catawba	J. W. Hendricks	Newton
Chatham	H. M. Kinsey	Pittsboro
Chowan	N. K. Rowell	Edenton
Columbus	J. T. Lazar	Whiteville
Currituck	J. E. Chandler	Currituck
Davidson	G. B. Blum	Lexington
Davie	W. F. Reece	Mocksville
Durham	O. H. Stanard	Durham
Edgecombe	Zeno Moore	Whitakers
Forsyth	R. W. Pou	Winston-Salem
Gaston	C. L. Gowan	Gastonia
Graham	R. W. Gray	Robbinsville
Granville	J. L. Dove	Oxford
Greene	A. M. Dickson	Snow Hill
Guilford	J. C. Beavers	Greensboro
Hertford	H. L. Miller	Winton
Iredell	R. W. Graeber	Statesville
Jackson	J. C. Brammer	Sylva
Johnston	S. J. Kirby	Smithfield
Jones	E. F. Fletcher	Trenton

Lenoir	C. M. Brickhouse	Kinston
Lincoln	W. L. Smarr	Lincolnton
Madison	E. D. Bowditch	Marshall
Martin	J. L. Holliday	Williamston
Mecklenburg	Charles E. Miller	Charlotte
Mitchell	J. W. Lindley	Bakersville
Montgomery	E. B. Garnett	Troy
Moore	M. W. Wall	Carthage
Nash	G. D. Burroughs	Nashville
New Hanover	J. P. Herring	Wilmington
Onslow	D. L. Latham	Jacksonville
Orange	E. S. Vanatta	Hillsboro
Pasquotank	G. W. Falls	Elizabeth City
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Pitt	W. B. Pace	Greenville
Polk	J. R. Sams	Columbus
Richmond	J. G. Lawton	Rockingham
Robeson	O. O. Dukes	Lumberton
Rockingham	F. S. Walker	Reidsville
Rutherford	L. D. Thrash	Rutherfordton
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Wilson	B. T. Ferguson	Wilson
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Yancey	F. E. Patton	Burnsville

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H. E. Webb, Greensboro, Guilford, Rockingham, and Alamance counties.
F. D. Wharton, Henderson, Vance, Warren, and Granville counties.
L. H. Roberts, Raleigh, Wake County.

Note.—All the white and negro men's and boys' work in the State is under the general supervision of the State Agent. All the white women's and girls' work is under the general supervision of Mrs. Jane S. McKimmon, State Home Demonstration Agent, Raleigh, N. C.

OFFICERS AND STAFF OF THE N. C. AGRICULTURAL EXPERIMENT STATION AND THE N. C. AGRICULTURAL EXTENSION SERVICE

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W. A. Graham ..... Commissioner of Agriculture
B. W. Kilgore ..... Director
C. B. Williams ..... Vice Director, Agronomist
A. F. Bowen ..... Bursar and Purchasing Agent
H. C. Evans ..... Auditor and Executive Assistant
R. W. Green ..... Agricultural Editor
W. F. Pate ..... Agronomist in Soils
E. C. Blair ..... Assistant Agronomist
S. K. Jackson ..... Assistant Agronomist in Soils
R. Y. Winters ..... Plant Breeding
S. W. Hill ..... Assistant in Plant Breeding
P. H. Kime[3] ..... Assistant in Plant Breeding
G. M. Garren ..... Assistant in Plant Breeding
M. W. Hensel[3] ..... Specialist in Sugar Plant Production
S F. Davidson ..... Assistant in Soil Survey
W. A. Davis ..... Assistant in Soil Survey
N. D. Lee ..... Assistant in Soil Survey
A. R. Russell ..... Assistant in Field Experiments
E. H. Mathewson[3] ..... Tobacco Expert
W. A. Withers ..... Chemist
F. W. Sherwood ..... Assistant Chemist
W. G. Haywood ..... Fertilizer Chemist
E. S. Dewar ..... Feed Chemist
G. L. Arthur ..... Assistant Chemist
B. C. Williams ..... Assistant Chemist
M. R. Stephenson ..... Assistant Chemist
L. M. Nixon ..... Assistant Chemist
Z. B. Bradford ..... Assistant Chemist
Franklin Sherman, Jr. ..... Entomologist
Z. P. Metcalf ..... Entomologist
R. W. Leiby ..... Assistant Entomologist
V. R. Haber ..... Assistant Entomologist
T. B. Mitchell ..... Assistant Entomologist
C. L. Sams[3] ..... Beekeeping
W. B. Mabee ..... Extension Entomologist
C. D. Matthews ..... Horticulturist
J. P. Pillsbury ..... Horticulturist
L. H. Nelson ..... Assistant Horticulturist

J. M. Dyer---Assistant Horticulturist
Dan T. Gray---Animal Industry
R. S. Curtis---Associate in Animal Industry
Stanley Combs---Dairy Experimenter
B. F. Kaupp---Poultry Investigator and Pathologist
J. A. Arey[2]---Dairy Farming
A. G. Oliver[2]---Poultry Extension
John E. Ivey---Assistant Poultry Investigator and Pathologist
E. G. Wardin---Assistant Poultry Investigator and Pathologist
F. R. Farnham[2]---Assistant in Dairy Farming
A. C. Kimrey---Assistant in Dairy Farming
D. R. Noland[2]---Assistant in Dairy Farming
F. T. Peden---Assistant in Beef Cattle
Earl Hostetler---Assistant in Beef and Swine
W. W. Shay[2]---Swine Extension
George Evans---Sheep Extension
F. A. Wolf---Plant Pathologist
R. A. Jehle---Extension Pathologist
S. G. Lehman---Assistant in Bacteriology
H. M. Lynde[4]---Drainage Engineer
F. O. Bartel---Junior Drainage Engineer
B. F. Brown---Chief, Division of Markets
P. H. Hart[6]---Assistant in Cotton Grading and Marketing
J. M. Johnson[5]---Farm Management
F. E. Miller---Assistant Director, in Charge Branch Stations
F. T. Meacham, Assistant Director, in Charge Piedmont Station, Iredell County, Statesville, N. C.
C. E. Clark, Assistant Director, in Charge Edgecombe Station, Edgecombe County, Rocky Mount, N. C.
E. G. Moss, Assistant Director, in Charge Tobacco Station, Granville County, Oxford, N. C.
Charles Dearing, Assistant Director, in Charge Coastal Plain Station, Pender County, Willard, N. C.
A. S. Cline, Assistant Director, in Charge Black Land Station, Wenona, N. C.
C. R. Hudson[1]---State Agent
Gorrell Shumaker---Assistant in Marketing Fruits and Vegetables
H. H. B. Mask[1]---Assistant State Agent
E. S. Millsaps---District Agent, Western District
T. D. McLean---District Agent, Central District
J. M. Gray---District Agent, Mountain District
O. F. McCrary---District Agent, Northeastern District
E. W. Gaither---District Agent, Southeastern District
Mrs. Jane S. McKimmon[1]---State Home Demonstration Agent
Miss Maude E. Wallace---Assistant State Home Demonstration Agent

MRS. J. H. HENLEY.....District Agent, Western District
MRS. ESTELLE T. SMITH.....District Agent, East Central District
MRS. CORNELIA C. MORRIS.....District Agent, Central District
H. B. KRAUSZ.....Farm Forestry
J. WULFF.....Assistant, Farm Forestry
E. R. RANEY.....Farm Engineering

The Experiment Station and the Extension Service are supported and conducted jointly by the College and State Department of Agriculture. A joint committee from the Board of Trustees of the College and the Board of Agriculture, under agreement entered into by the Boards and authorized by an act of the Legislature in 1913, have direct charge of them.

1In coöperation with the United States Department of Agriculture, States Relations Service.

2In coöperation with the United States Department of Agriculture, Bureau of Animal Industry.

3In coöperation with the United States Department of Agriculture, Bureau of Plant Industry.

4In coöperation with the United States Department of Agriculture, Office of Roads and Rural Engineering.

5In coöperation with the United States Department of Agriculture, Office of Farm Management.

6In coöperation with the United States Department of Agriculture, Bureau of Markets and Rural Organizations.

7In coöperation with the United States Department of Agriculture, Bureau of Soils.

8In coöperation with the United States Department of Agriculture, Bureau of Entomology.

MILITARY ORGANIZATION

PROFESSOR OF MILITARY SCIENCE AND TACTICS

Lieutenant-Colonel Daniel D. Gregory, United States Army, Retired

COMMANDANT

Major Charles N. Hulvey, Infantry Officers' Reserve Corps

ASSISTANT INSTRUCTORS

Captain Harry E. Fischer, Infantry, United States Army
First Lieutenant Nathaniel L. Simmonds, Infantry, United States Army
Warrant Officer Charles B. Rickert, United States Army
Staff Sergeant Horace C. Thomas, United States Army
Sergeant Jacob E. Baker, United States Army
Sergeant Lawrence H. Brown, United States Army
Sergeant Albert P. Hammond, United States Army

REGIMENTAL FIELD AND STAFF OFFICERS

Charles D. Kirkpatrick, Lieutenant-Colonel
Joseph G. Evans, Captain and Adjutant

BATTALION FIELD AND STAFF OFFICERS

William H. Corpening Major, 1st Battalion
Judson D. Albright, Jr., Major, 2d Battalion
Louis B. Daniel, Major, 3d Battalion
John C. Terry, First Lieutenant and Adjutant, 1st Battalion
Dewey A. Floyd, First Lieutenant and Adjutant, 2d Battalion
Grady W. Bowers, First Lieutenant and Adjutant, 3d Battalion

NONCOMMISSIONED STAFF

Averette G. Floyd, Master Sergeant
Raymond W. Kraft, Color Sergeant
Edward R. Spruill, Color Sergeant
Edwin O. Clarkson, Sergeant Bugler

HEADQUARTERS COMPANY

Edwin C. LeGrand, Captain
William F. Shipman, First Lieutenant, One-Pounder Section

BAND SECTION

P. W. Price (Faculty), Captain
Basil D. Barr, First Lieutenant
Otis A. Zachary, First Lieutenant and Drum Major

Wade H. Rice, Second Lieutenant
Carl Taylor, First Sergeant
E. D. Barr, Sergeant
W. W. Starr, Sergeant
L. R. Harrill, Corporal
E. T. Kearns, Corporal

COMPANY "A"

W. R. Wearn, Captain
F. S. Childs, First Lieutenant
L. O. Armstrong, Second Lieutenant
G. B. Cherry, First Sergeant
G. T. Barnes, Sergeant
J. T. Ervin, Sergeant
Joseph D. Groome, Sergeant
T. W. Alexander, Corporal
C. E. Bailes, Corporal
B. H. Conner, Corporal
P. K. Ewell, Corporal
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W. F. Graham, Corporal

COMPANY "B"

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J. D. Wallace, Second Lieutenant
R. M. Stikeleather, First Sergeant
A. F. Everhart, Sergeant
H. S. Hill, Sergeant
J. H. Norwood, Sergeant
T. N. Park, Sergeant
D. B. Jenkins, Corporal
J. F. Johnson, Corporal
H. J. Kinard, Corporal
L. R. LeGwin, Corporal
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G. T. Peoples, First Lieutenant
E. B. Manning, Second Lieutenant
G. L. Booker, First Sergeant
E. R. Betts, Sergeant
F. S. Clark, Sergeant

W. I. Pickens, Sergeant
L. E. Allen, Corporal
T. F. Beamer, Corporal
G. H. Bennett, Corporal
E. D. Pasour, Corporal
D. D. Overton, Corporal
S. H. Strickland, Corporal

COMPANY "D"

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J. P. Beal, First Lieutenant
C. W. Absher, Second Lieutenant
L. J. Jordan, First Sergeant
W. H. Browne, III, Sergeant
A. J. Corpening, Sergeant
W. T. Harding, Jr., Sergeant
W. W. Cantrell, Corporal
F. T. Vance, Corporal
H. T. Ivey, Corporal
C. D. Lemmond, Corporal
V. L. Ashworth, Corporal

COMPANY "E"

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J. A. Temple, First Lieutenant
R. V. Biberstein, Second Lieutenant
H. M. Shaw, Jr., First Sergeant
C. O. Butler, Sergeant
W. T. Sledge, Sergeant
W. N. Hicks, Sergeant
J. O. Holt, Sergeant
W. D. Hampton, Corporal
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T. K. Roberts, Corporal
H. E. Rea, Corporal
I. W. Faires, Corporal

COMPANY "F"

H. D. Long, Captain
W. A. F. Lawing, First Lieutenant
D. A. Wicker, Second Lieutenant
D. L. Cannon, First Sergeant
C. A. Cilley, Sergeant

A. L. Sears, Sergeant
H. H. Bangs, Corporal
N. B. Chesnutt, Corporal
J. L. Higgins, Corporal
G. T. Parker, Corporal
C. F. Paxton, Corporal
F. A. Townsend, Corporal

COMPANY "G"

M. L. Rhodes, Captain
A. S. Jennette, First Lieutenant
C. D. Arthur, Jr., Second Lieutenant
B. W. Williams, First Sergeant
G. P. Floyd, Sergeant
L. W. Greene, Sergeant
E. G. Singletary, Sergeant
H. H. Weaver, Sergeant
C. R. Barber, Corporal
H. A. Deal, Corporal
A. J. Floyd, Corporal
H. D. Green, Corporal
A. C. Hamrick, Corporal
H. S. Lemmond, Corporal
T. F. Stradley, Corporal

COMPANY "H"

H. C. Weathers, Captain
H. W. Allsbrook, First Lieutenant
R. D. Turner, Second Lieutenant
E. W. Ruggles, First Sergeant
J. H. Blue, Sergeant
F. H. Corpening, Sergeant
W. O. Crary, Sergeant
R. D. V. Sisk, Sergeant
C. Churchill, Corporal
E. R. Commander, Corporal
W. M. Cummings, Corporal
W. H. Jennings, Corporal
N. D. Peirson, Corporal
D. R. Wright, Corporal

COMPANY "I"

R. L. Mills, Captain
L. C. Guirkin, First Lieutenant

J. P. Johnson, Second Lieutenant
W. O. Powell, First Sergeant
O. L. Bradshaw, Sergeant
W. L. Steele, Sergeant
A. M. Worth, Sergeant
J. T. Alderman, Jr., Corporal
G. S. Arthur, Corporal
C. D. Buchanan, Corporal
J. C. Foscue, Corporal
P. F. Lancaster, Corporal
C. W. Pegram, Corporal

GENERAL INFORMATION

During the years in which North Carolina was emerging from the economic havoc wrought by Civil War and Reconstruction, some farsighted men began to see the necessity of rearing industrially equipped men. They felt keenly the need of competent men to build and direct new industries, and to restore the fertility of the land. They recognized that men capable of doing what was needed would have to be educated in industrial schools and technical colleges.

The first organized body to take steps for the establishment of a State industrial institution in North Carolina was the Watauga Club. This club, composed of progressive young men, explained its mission by declaring that it was "an association in the city of Raleigh designed to find out and make known information on practical subjects that will be of public use." In 1885 this club presented to the Legislature a memorial urging that body "to establish an industrial school in North Carolina which shall be a training place for young men who wish to acquire skill in the wealth-producing arts and sciences."

This memorial quickened general interest in the proposed school, and several bills looking to its foundation were introduced in the Legislature of 1885. On March 7th, one of these bills, introduced by Hon. Augustus Leazar of Iredell County, became a law. This law provided that the Board of Agriculture should seek proposals from the cities and towns of the State, and that the school should be placed in the town offering the greatest inducements. The Board of Agriculture finally accepted an offer from the city of Raleigh.

Meantime, the ideas of the advocates of the school had been somewhat broadened as to the character of the proposed institution.

These men saw that Congress was about to supplement the original land grant by an additional appropriation for agricultural and mechanical colleges in each State. The originators of the conception then sought the aid of progressive farmers in order to change the school into an agricultural and mechanical college. Colonel L. L. Polk, the editor of the newly-established **Progressive Farmer,** threw the weight of his paper heartily into the idea. Meetings were held in various places, and two very large meetings in Raleigh considered the proposition. As a result, the school already provided for was by action of the Legislature of 1887 changed into an agricultural and mechanical college, and the Congressional Land Scrip Fund was given the newly formed insti-

tution. In addition, the law directed that any surplus from the Department of Agriculture should go into the treasury of the college. Mr. R. Stanhope Pullen, one of Raleigh's most broad-minded citizens, gave the institution eighty-three acres of land in a beautiful suburb of Raleigh. Additional funds were afterwards provided by the Supplemental Morrill Bill passed by Congress in 1890, by the Nelson Bill of 1907, and by State appropriations. The first building was completed in 1889, and the doors of the College were opened for students in October, 1889. Seventy-two students, representing thirty-seven counties, were enrolled the first year. The faculty consisted of six professors and two assistants. From this small beginning in 1889 the College has grown steadily from year to year.

The College is beautifully located on the extension of Hillsboro street in the western part of Raleigh, a mile and a quarter from the State Capitol. The site is suitable in all respects.

There is an abundant supply of water from the city mains and from twelve deep wells on the College grounds. The water is analyzed, both chemically and bacteriologically, at regular periods.

The College now owns four hundred and eighty-six acres of land. Fifteen hundred young trees and nine hundred and forty vines are growing in an orchard of twenty-five acres. Seven acres are devoted to truck growing. The campus consists of about thirty acres of rolling land, which is being improved as rapidly as circumstances permit.

BUILDINGS

The College has the following buildings, all of which are well lighted, heated, and ventilated, and adequately protected against fire.

Holladay Hall, the administration building, 170 feet long by 64 feet deep, is a three-story brick structure with a basement. The basement floor is devoted to the classrooms and laboratories of the Physics Department. The main and second floors contain the offices of the Executives and classrooms of the Departments of English, Mathematics, and Economics.

Patterson Hall, the main Agricultural building, is a buff pressbrick structure, 204 feet long by 74 deep, of two stories and a basement. The lower floor is used as a dairy with washrooms and sterilization chamber. The first floor provides room for the offices of the Experiment Station and Extension Service, and for classrooms and laboratories of the departments of Agronomy, Horticulture, Soils, and Agricultural Extension. The second floor accommodates the departments of Botany and Plant Pathology, and of Physiology and Veterinary Medicine.

The Animal Husbandry Building is of brick, two stories and basement. Rooms of the Poultry Department and a stock-judging room are included in the basement. The first floor is occupied by the departments of Animal and Poultry Husbandry. The second floor is devoted to the Department of Zoölogy and Entomology for laboratories and classrooms.

Winston Hall is built of brick, with reinforced concrete floors, three stories high, including the basement. The basement and main floor are occupied by the Civil and Electrical Engineering Departments for laboratories, instrument rooms, classrooms, and drafting rooms. The second floor contains recitation rooms and laboratories of the Department of Chemistry and the Chemical Department of the State Experiment Station.

The Mechanical Engineering Building is a plain, substantial two-story brick building furnishing room for the drawing and recitation rooms of the Mechanical Engineering Department.

The Textile Building is a two-story brick building, 125 by 75 feet, with a basement. Its construction is similar to that of a cotton mill, and is an illustration of standard construction of this class of buildings. The basement contains the dyeing department, the first floor the looms and warp preparation machinery, and the second floor the carding and spinning machinery.

Primrose Hall, one story and a basement, is used for the offices of the Department of Farm Management, and also by the Extension Service for its department of Farm Demonstration.

The Shop and Laboratory Building is an illustration of the standard construction of modern shop buildings. It is a one-story and part basement L-shaped structure, one dimension being 170 feet and the other 195. The basement serves as a laboratory and storage room. The main floor embraces a machine shop, woodshop, forge shop, foundry and demonstration rooms, and tool rooms.

Pullen Building is a two-story colonial brick building with a basement. The lower floor is used as an armory. The main floor gives quarters for the library and two classrooms. The upper story serves as the College auditorium, and seats about one thousand people.

The Dining Hall, which is 144 by 54 feet, will accommodate about seven hundred people. A large kitchen completely supplied with modern conveniences and utensils, the preparation rooms, serving rooms, store-rooms, etc., along with the hall proper, make this building an attractive feature of the College.

The Y. M. C. A. Building is the home of the greater part of voluntary student activities. It is an attractive two-story and basement brick building handsomely equipped with mission furniture throughout. The basement contains the gymnasium, swimming pool, bowling alleys, shower baths, and athletic rooms. The main floor has a large lobby, with open reading and game rooms, an auditorium, a banquet hall, several bedrooms for visitors, and offices of the Association and of College publications. The upper floor contains two large society halls and rooms for Bible study classes.

The Infirmary is a two-story brick building containing separate rooms and wards for the care of the sick. Offices and rooms for the College physician and matron are also provided. The building is well equipped to serve its purposes.

Watauga Dormitory provides rooms for one hundred and twenty students. It is a three-story brick structure with a basement.

Nineteen-Eleven Dormitory, the largest dormitory on the grounds, is divided into sections by fireproof walls. It furnishes rooms for two hundred and forty students. Large and convenient bathrooms are located in the basement of the building.

First Dormitory, a two-story brick structure, affords accommodations for twenty students.

Second Dormitory, built on the same plan as the First Dormitory, will house twenty students.

Third Dormitory has rooms for twenty students.

Fourth Dormitory, a three-story brick structure, furnishes rooms for forty-eight students.

South Dormitory is a completed wing of what will soon be a handsome building similar to Nineteen-Eleven Dormitory. The wing furnishes rooms for forty-eight students.

The Two Unit Dormitories to be completed in time for occupancy in September, 1921, will provide accommodations for one hundred and forty students. These dormitories are of brick, two stories high. They are plain in design and have all rooms well lighted and well ventilated. There are convenient bath rooms on each floor. The buildings are fireproof throughout.

The Farm Buildings are nine in number: six barns, capacious and modern in every respect, for the housing of the stock and storing of feedstuffs and implements; the home of the dairyman, near the barns; two cottages for foremen of dairy and agronomy

farms; the Horticulturist's home in the orchard; and the Poultry Plant, comprising the home of the instructor in charge and the various buildings and pens for the raising of fowls.

The Central Power Plant furnishes heat, light, and power for all the College buildings. The boiler plant consists of two 75-horsepower and two 150-horsepower boilers with a working steam pressure of 150 pounds. The engine plant is equipped with a 100-horsepower engine, generators, and steam and vacuum pumps.

AGRICULTURAL EQUIPMENT

Farm Crops. The equipment for teaching Farm Crops consists of standard apparatus and type trays for the study and determination of market grades of cereal grains and cotton. Other equipment consists of type samples of all cultivated legumes, grasses, cotton, and tobacco, dried plants and their seeds, and illustrative material in the form of charts, lantern slides, and pictures. Modern equipment will be used on the department farm in the field study and practice of good cultural methods for the production of field crops. Standard equipment is available for use in the teaching of Farm Management.

Soils. A completely equipped laboratory affords exceptional facilities for instruction in general soils. The College farm is used for the practical work in drainage, terracing, fertilization, and study of soil types.

Horticulture. The Service Building, Greenhouse, and a laboratory furnished with necessary apparatus are devoted to this department. The Horticultural grounds of twenty-five acres contain student vegetable gardens, orchards, vineyards, plantings of berries, and spaces used for nursery purposes. The department also has charge of the development of the College campus.

Botany. The Department of Botany possesses two student laboratory rooms, a well equipped bacteriological laboratory, a temperature room, a dark room, a preparation room, and two offices. The laboratories are equipped with the necessary microscopes, apparatus for physiological work, and collections of plant materials for student use. The Library, which is installed in the Department, contains most of the more important modern botanical books and extensive bound files of American botanical journals.

Animal Husbandry and Dairying. The Department is well equipped to instruct students in the profitable types of farm ani-

mals, how to handle them so as to get the best returns, how to select breeding stock, how to feed and market all classes of farm animals. The offices, classrooms, and laboratories are attractive and are arranged to give the students all the advantages possible. The department operates a farm, which is a laboratory for students taking Animal Husbandry subjects. The dairy barns are filled with more than sixty registered cattle representing four breeds. A sufficient number of swine are kept to give students practice in every phase of the industry. The same is true of horses and sheep. The farm is organized to emphasize the growing of permanent and temporary pastures, small grains, hay, and silage crops, all of which are fed to the animals belonging to the department.

Agricultural Engineering. This department is well equipped with agricultural farm equipment for lecture, field, and laboratory student work. Through the generosity of numerous branch houses and manufacturers, the laboratory is equipped with all the modern tilling, seeding, harvesting, and fertilizer distributing machinery that is suitable for use on North Carolina farms. The farm motors laboratory is equipped with thirteen different types of stationary gas engines, three lighting plants and water systems, and seven different types of traction engines. The laboratory is also equipped with testing instruments such as traction dynamometers, prony brakes, planimeters, and speed counters. The irrigation and terracing laboratory is equipped with levels, ranging poles, rods, taps, hand axes, pins, etc.; also with spades and drain cleaners for laying out farm drainage and terracing systems.

Poultry Husbandry. The poultry plant contains breeding pens suited to poultry keeping in North Carolina. Incubators, brooders, and other equipment are supplied. The laboratories are furnished complete with poultry appliances.

Veterinary Science. The laboratories and the dissecting and pharmacy rooms are supplied with all necessary apparatus. For class and laboratory instruction there are mounted skeletons, specimens of diseases, and a collection of parasites which infest domestic animals.

Zoology and Entomology. The second floor of the Animal Husbandry Building is devoted to this department. An excellent laboratory is provided with the usual equipment of a Zoological laboratory. The department has a museum and its own library.

The new insectary and beekeeping laboratory furnishes much additional space for the study of injurious and beneficial insects

and for the study of better beekeeping. There are in the beekeeping laboratory special rooms for hive making and for extracting honey and for the study of the anatomy of the bee, with an especially full and modern equipment in all lines of work.

ENGINEERING EQUIPMENT

Civil Engineering. The equipment consists of all instruments necessary for laboratory and field practice in Civil Engineering, such as transits, levels, plane tables, sextants, etc. Apparatus is also furnished for testing cement. The department has its own library, and is well supplied with filing cases and reference maps.

Highway Engineering. Complete laboratory for testing road-building material.

Mechanical Engineering. The Forge Shop is equipped with forty anvils and twenty double forges of the down-draft type, an exhaust system, a special gas furnace for the treatment of steel, and other necessary apparatus.

The **Foundry** equipment consists of a cupola, brass furnace, sand-sifter, core machine, core oven, molding machines, and all necessary tools for bench and floor work.

The **Woodshop** is excellently equipped with lathes, saws of various kinds, planes, jointers, mortisers, sanders, and other machinery essential to an up-to-date woodshop.

The **Machine Shop** contains lathes, shapers, drill presses, grinders, planer, milling machine, and a full equipment of necessary minor tools and conveniences.

The **Mechanical Laboratory** is supplied with steam, gasoline, oil, and automobile engines; with instruments for measuring, testing, and analyzing; with 50,000-pound and 15,000-pound testing machines. The power plant is also available for tests.

Electrical Engineering. Quarters for this department are provided in Winston Hall. The classrooms are well equipped for lectures and demonstrations. The instrument laboratory is fully supplied with standardizing apparatus and measuring instruments. The dynamo laboratory is provided with various types and sizes of generators and motors and transformers, and a complete equipment of measuring instruments. There is an excellent storage battery, photometric room, and a well equipped shop. Machinery of the college power plant is available for testing and inspection.

The Radio Laboratory is well equipped for receiving and sending radio telephone and radio telegraph messages, as well as for carrying on experimental work in this field.

Physics. The William Kearny Carr Physical Laboratory includes two lecture rooms and six laboratories, excellently equipped. The research laboratories offer exceptional facilities for advanced study in Physics. They include a darkroom for work in light, a sound-proof room for acoustic work, and a shop and batten room. The equipment of these laboratories and the demonstration and research apparatus are of the highest grade.

CHEMICAL QUARTERS AND EQUIPMENT

The entire second floor of Winston Hall is given over to three classrooms, three large laboratories, a library, and other rooms of the department of Chemistry. The equipment is extensive and complete for the many courses offered.

TEXTILE EQUIPMENT

The equipment of this department consists of the latest types of cotton mill machinery, manufactured by American builders. Electricity is used as a motive power, the machinery of each department in the building being driven by a separate motor.

Carding. The card room is located on the second floor of the building. This room contains breaker, picker, finisher, lapper, cards, drawing frames, roving frames, combing outfit.

Spinning. This department is also located on the second floor. The equipment consists of five spinning frames, and machinery for spooling, twisting, reeling, winding, and warping.

Weaving. The entire main floor is given over to this department. For warp preparation the equipment consists of bobbin-winding machines, beaming machines, and a slasher. The looms, thirty in number, manufacture sheeting, gingham, toweling, and all kinds of fancy goods, including jacquards. The finishing is done by sewing and rolling, inspecting and brushing machines.

Dyeing. The basement of the building is fitted up with a classroom, laboratory, and dyehouse for instruction in dyeing, and with dyeing machinery. The laboratory has all the necessary apparatus for experimental and practical instruction. The dyehouse is equipped with the proper machinery needed in the dyeing of large quantities of material.

THE AGRICULTURAL EXPERIMENT STATION

The North Carolina Agricultural Experiment Station was established originally as a division of the State Department of Agriculture, in accordance with an act of the General Assembly ratified March 12, 1877. Its work was greatly promoted by act of Congress of March 2, 1887, known as the Hatch Act, which made a donation to each State for the purpose of making investigations in agriculture, and for publishing the results. The funds of the Experiment Station were further supplemented by the act of Congress of March 16, 1906, known as the Adams Act. Under the requirements of the Hatch Act, the Station became a department of the College and was conducted jointly by the College and the Department of Agriculture from 1889 to 1907, with the exception of three years. Under an agreement entered into between the Board of Trustees of the College and the Board of Agriculture in January, 1912, and authorized by act of the Legislature of 1913, the work of the Experiment Station, which covers all of the experimental work in agriculture in the State, is jointly conducted and supported by the College and State Department of Agriculture.

The experimental work in the field in agriculture, horticulture, stock and poultry raising, dairying, etc., is conducted on the College farm and on the test farms of the Department of Agriculture in different parts of the State, and the laboratory investigations are conducted in the laboratories of the two institutions.

The Station is always glad to welcome visitors and to show them the work in progress. The Station conducts a large correspondence with farmers and others concerning agricultural matters. It takes pleasure in receiving and answering questions.

Bulletins relating to general farm matters, embodying the results of the experiments, are sent free to all citizens of the State who request them. A request addressed to the Agricultural Experiment Station, State College Station, Raleigh, will bring these publications. The Station is glad also to answer letters of inquiry.

AGRICULTURAL EXTENSION SERVICE

Yearly increasing amounts of Extension work have been done by the College and the North Carolina Department of Agriculture since their organization. At first this took the form of analyses of fertilizers, marls, phosphates, composts, and various agricultural products, and advice on these several matters. Farmers' Institutes were started at a later date and are continued at the present, and other forms of Extension service have been conducted along a number of lines. In 1906 Farm Demonstration work,

through county agents and special workers, was begun, and Boys' and Girls' clubs were soon made a part of it.

This division conducts the Corn Clubs, Poultry Clubs, Pig Clubs, Potato Clubs, and Peanut Clubs for the boys and girls of the State, and the Canning Clubs for the girls. The active membership of these clubs is confined to young people between the ages of ten and eighteen years, but adults are permitted to join the Pig and Poultry Clubs, and get all instruction sent the active members. In these clubs the young people are taught to grow crops or animals upon their own farms according to the teachings of modern science, and are shown the wonderful possibilities of farming in accordance with a few fundamental scientific laws.

In addition to the instruction through monthly letters, bulletins, and visits of the Extension workers, club schools are held at the farm-life schools and at county-seats during the summer, at which the members are given two or three days of technical instruction.

There is also held at the State College of Agriculture and Engineering during each August a one-week Short Course for members of all the clubs, conducted by the Extension Division.

Under a joint arrangement between the State College of Agriculture, the State Department of Agriculture, and the State Department of Education, perfected October 1, 1916, the State Agent in Boys' Club work was appointed State Supervisor of Secondary Agricultural Education. His duties pertain particularly to the supervision of the farm-life schools and the direction of agricultural teaching in the rural schools of the State.

Because of the very close relation between the club work and the school work, those in authority deemed it wise to place the direction of all this work under one supervision. The club work should be made the vitalizing agency for all agricultural teaching in the rural schools. By utilizing the "Home Project" plan and having all this work supervised from the same office, the teaching and practical work are more closely related.

In January, 1912, under an agreement entered into between the Board of Trustees of the College and the Board of Agriculture, and authorized by an act of the Legislature in 1913 (chapter 68, Public Laws of 1913), all of the Extension and Demonstration work in the State was brought together and conducted jointly by the two institutions, in coöperation with the United States Department of Agriculture.

The Congressional Smith-Lever Act of May 8, 1914, has made possible a larger development of the Extension Service. The Extension Service has for its main object the carrying of new facts and good practices obtained in experimental work and in good

farming to the farmers and farm women of the State, through county men and women agents and workers in special lines. These workers spend most of their time in the field in efforts to bring about better farming, better homes, coöperation among farmers, and more profitable marketing of farm products.

The Extension forces at headquarters are housed in the buildings of the College and of the State Department of Agriculture, offices and conveniences for work having been supplied by these two institutions, and in the main equipped by them.

THE PURPOSE OF THE COLLEGE

The College is an institution where young men of character, energy, and ambition may fit themselves for useful and honorable work in many lines of industry in which training and skill are requisite to success. It is intended to train farmers, mechanics, engineers, architects, draftsmen, machinists, electricians, miners, metallurgists, chemists, dyers, mill workers, manufacturers, stock raisers, fruit growers, truckers, and dairymen, by giving them not only a liberal but also a special education, with such manual and technical training as will qualify them for their future work.

It offers practical and technical education in agriculture, horticulture, animal industry, civil engineering, mechanical engineering, electrical engineering, chemistry, dyeing, and textile engineering. It also offers practical training in carpentry, woodturning, blacksmithing, machinist's work, mill work, boiler tending, engine tending, dynamo tending and installation, electric light wiring, armature winding, and other subjects relating to practical electricity.

Although the leading purpose of the College is to furnish technical and practical instruction, yet other subjects essential to a liberal education are not omitted. Thorough instruction is given in English, mathematics, political economy, physics, chemistry, botany, zoölogy, physiology, and geology.

The College is not a place for young men who desire merely a general education without manual or technical training, nor for lads lacking in physical development, mental capacity, or moral fiber, nor for those who are unable or unwilling to observe regularity, system, and order in their daily work.

WHAT THE COLLEGE EXPECTS OF ITS STUDENTS

The College does not have many rules. It expects that its students will live rightly for their own sakes and for the sake of the State that is educating them. The fundamental law of the College is this: Always and everywhere, be a gentleman.

A record is kept of every student. If it is apparent from this record that a student is not studying or that his conduct is not meeting the requirements of the College, such student will be required to withdraw. Scandalous, vicious, or immoral conduct will necessitate immediate dismissal.

Students attend this College to fit themselves for a technical business life. They are therefore expected to be businesslike in their habits, to be prompt in their attendance, and regular at chapel, classes, shops, drills, inspections, and all other duties. To prepare themselves for their daily work, students are expected to observe in their own rooms the regular morning and evening hours of study, and to be absent from College only at the regular specified periods. These periods are as follows: for Juniors, Friday, Saturday, and Sunday nights; for Sophomores, Saturday and Sunday nights; for Freshmen, Sunday nights. Saturday and Sunday afternoons are liberty afternoons.

Students are expected to keep their rooms neat and sanitary; to refrain from disturbing one another by noise in the buildings or on the grounds—in short, to conduct themselves in their College home with the same courtesy, self-respect, and propriety that they do in their own homes.

Visiting poolrooms, leaving College after 11 o'clock at night, willful destruction of College property, drinking, immorality, gambling in all forms, hazing of any kind, disrespect to members of the Faculty or officers of the College, any conduct unbecoming a gentleman—it is expected that a student's self-respect will lead him to abstain from these offenses, and should any student be found guilty of them he will be excluded from the College.

REPORTS AND SCHOLARSHIP

Regular reports of scholarship are sent by the Registrar to parents and guardians at the end of each term. Special reports are made whenever necessary. Whenever a student fails on a subject during a month, such failure is reported to his parents. Students who are persistently neglectful of duty, or manifestly unable to do the work required, will be discharged at any time. The Faculty will require any student to withdraw whenever it is plain that his stay in the institution is unprofitable to himself and to the College.

RELIGIOUS INFLUENCES

All students are required to attend chapel exercises in Pullen Auditorium each morning. These services are conducted by the President, by some member of the Faculty, or by some visiting minister or layman.

Each student is expected to attend religious services in Raleigh on Sunday morning at the church of his choice. The students are always welcomed in the Sunday schools of Raleigh, and a large number of them attend these services.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association is a voluntary organization among the students for the purpose of centralizing and directing the moral and religious life of the student body. The work is under the direction of a General Secretary, who is employed to give his entire time to the work, and of the following student officers: president, vice president, corresponding and recording secretaries, and treasurer. Active assistance is also given by an Advisory Committee, which includes three members of the Faculty and six prominent business men in Raleigh. The president and treasurer of the Association are ex officio members of this committee.

The membership fee for all College students is four dollars a year. This small fee was made possible during the session of 1916-17, when the student body, as a whole, expressed its desire of having every student, at the beginning of each term, pay over to the College Bursar one dollar as his dues for the ensuing term. The fee has since been voluntarily increased to four dollars per year.

Only members of evangelical churches may become active members. A handbook giving general information about the College is published each spring and sent to prospective students, with a personal letter of welcome from the officers of the Association.

A large number of men are trained each year in active Christian service through membership on the following standing committees, all of which are trained by the General Secretary in their particular work: Bible Study Committee, which has charge of the organization of voluntary Bible Study classes among the students; Religious Meetings Committee, which provides speakers and arranges programs for the weekly meetings of the Association; Mission Study Committee, which provides for Mission Study among the students; Social Committee, which provides means of social entertainment and diversion; and Finance Committee. Each committee is held responsible for its part of the Association's activities.

The Association is supported by a yearly appropriation from the College, by gifts from the Faculty, the parents of the boys, and the Alumni, and by its regular membership.

The Y. M. C. A. occupies its own building, which was erected at a cost of $41,000. This building is conveniently situated on the campus.

Parents or students wishing to obtain further information about the work of the Association may do so by addressing the General Secretary, State College Station, Raleigh, N. C.

ATHLETICS

The Athletic Association is organized by the student body to promote physical health and manly spirit through athletic sports. Under the direction of the Athletic Committee of the Faculty it promotes practice in baseball, basketball, football, track athletics, etc. The Association employs a director who devotes all of his time to the interests of this department.

The Athletic Park, Riddick Field, is situated in the center of the campus, conveniently located to all dormitories and to the dressing rooms, shower baths, and bathing pool in the Y. M. C. A. building. It is provided with concrete bleachers, built on the unit plan, supplemented with temporary wooden stands, to take care of the overflow at the larger games.

It is the aim of the College to encourage general participation in athletic sports by the students. In order to promote interest in athletics the College teams are allowed to play a limited number of games with the teams of other colleges, while all students are allowed and encouraged to take part in intramural games. The College recognizes that college athletics are promoted for the benefit of its bona fide students, and in order to prevent abuses the following regulations in regard to intercollegiate games are in force:

Eligibility Rules of the North Carolina State College of Agriculture and Engineering

Any student of good and regular standing shall be eligible to represent this College in athletic contests, subject to the following conditions:

1. Before any student can become a member of any athletic team in the College and take part in any intercollegiate contest, he must apply to the Faculty Committee on Athletics and secure its approval of his application. It shall be the duty of the Faculty Committee on Athletics to see that the said student is properly enrolled in the College.

2. It shall be the duty of the Athletic Committee to inquire into and make record of the athletic experience of the applicant, and it

shall be the duty of the applicant to appear before the committee and answer on his honor such questions as the committee may see fit to ask.

3. No student shall take part in any contest who has taken part in intercollegiate contests for four academic years, either at this College or at any other college or university.

4. No student shall participate who is receiving, has received, or has been promised, directly or indirectly, any money or financial concessions as compensation for or prior consideration to his playing.

5. No student shall participate in athletic sports who does not matriculate within thirty (30) days of the opening date of the current session.

6. No student shall participate who has played baseball on any league team belonging to the National Association, or to any league recognized by the National Baseball Commission as an "outlaw league," or who has missed any time from College work in order to play on any organized so-called "summer baseball team."

7. No student who is recognized by the Athletic Council as a member of any team shall be eligible the following session, unless he has remained as a resident student two-thirds of the preceding session, and can give satisfactory reason for not remaining the whole session.

8. No graduate student who is not a bona fide applicant for a degree conferred by this College shall be allowed to participate.

9. No person whose name appears in the Catalog list of officers of instruction or administration of the College and who receives remuneration therefor shall be a member of any athletic team representing the College.

10. No undergraduate student shall take part in any athletic contest who is not pursuing one of the regular prescribed courses of instruction or its equivalent, nor will he be allowed to participate if his class work be unsatisfactory.

11. No student shall be allowed to represent the College in any intercollegiate contest during any month if he has been reported deficient on a majority of his work for the preceding month.

12. No student shall participate in any intercollegiate football or baseball game during his first college year; and in no case shall a student be eligible for these teams unless he shall have registered in this College not later than within thirty days after the opening of the spring term, and shall have been a student here during the said term.

13. The object of these rules is to allow only bona fide students to take part in athletic contests, and if it shall appear to the

Faculty and Athletic Committee that any student is, or has ever been a professional athlete, or that he is in college for the purpose of taking part in athletics and not of getting an education, such student shall not be allowed to represent the College in any athletic contest.

Note 1. The term session is interpreted to mean a college year of two terms.

LIBRARY AND READING ROOM

The College Library occupies the first story of Pullen Hall. The reading room is supplied regularly with about one hundred and fifty magazines and journals of various kinds, and yearly additions are being made to this number. The library contains about eight thousand volumes. There are also reference libraries in the different departments. The library is kept open from 9 a. m. to 6 p. m., and from 7 to 8:50 p. m. The Librarian is always present to assist students in finding desired information.

The Olivia Raney Library in Raleigh is free to students, and they have the privilege of borrowing books from it.

Students are also allowed to consult books in the **State Library.**

STATE MUSEUM

Students have free access to the large collections of the State Museum. These collections furnish most excellent opportunities for studies in Geology, Mineralogy, Mining, Forestry, and Natural History.

COLLEGE SOCIETIES

Such college organizations are encouraged as tend to form good character, to develop manly physical vigor, and to promote literary, scientific, and technical research and training.

The Biag Society is composed of those students who have made the best record in biological and agricultural subjects. The membership is limited to twelve. The society meets monthly for the discussion of biological and agricultural questions.

Farmers Progressive Association. The students in the Farmers Course in Agriculture meet every Wednesday night during the winter term for a discussion of practical problems. The meetings are conducted in the manner of a Farmers Institute, and give training in conducting farmers' meetings, in ex tempore speaking on agricultural questions, and in the writing and reading of reports on various farm operations.

The Agricultural Club. The purpose of this club is to interest the Agricultural students in the practical side of Agriculture and start them to working along progressive lines.

Weekly meetings are held at which practical topics are discussed. Essays dealing with specific problems are read and debates held on current Agricultural questions. Liberal prizes are given in the various contests. A corn show open to all Agricultural students is held each year by the club.

The Tompkins Textile Society. The purpose of this society is to discuss textile problems and other subjects in connection with the textile industry. Meetings are held fortnightly, and great interest is taken in them by the textile students.

The Mechanical Engineering Society meets every week for the discussion of engineering subjects. The society is composed of Seniors and Juniors taking the Mechanical Engineering Course. Its work has proved very beneficial to its members.

Electrical Engineering Society. A student branch of the American Institute of Electrical Engineers was organized at the College several years ago. It holds weekly meetings for the reading and discussion of papers. At convenient intervals the society makes trips to inspect interesting electrical installations. From time to time addresses are made by visiting engineers.

Berzelius Society meets fortnightly for discussion of chemical topics, and for reports upon the leading articles in the chemical journals.

The Pullen and Leazar Literary Societies afford excellent opportunities for practice in declamation, debate, composition, and parliamentary law, as well as opportunities for social pleasure and recreation.

PHYSICAL EXAMINATION

At the beginning of the year every student will be given a thorough physical examination by the College Physician or by a medical officer detailed by the War Department. This is done in order that steps may be promptly taken for the correction of physical defects. Students are advised to begin their work in the best possible physical condition.

TYPHOID INOCULATION

Believing that students may be safeguarded from typhoid fever by inoculation against this disease, to which young people are peculiarly susceptible, the College offers this preventive free of charge, and urges all of its new students to take the treatment. Parents are requested to join the College in recommending that their sons be inoculated here, or to have them inoculated at home.

REQUISITES FOR ADMISSION

Each applicant for admission must be at least sixteen years of age and must bring a certificate of good moral character from the school last attended.

FOUR-YEAR COURSES

Beginning with September, 1921, 15 units of credit will be required for unconditioned admission to the four-year courses. Of these units 8½ are in specified subjects; 6½ are in elective subjects.

A unit is defined as a subject pursued in schools of approved grade for five periods a week throughout the year, each period being at least forty minutes.

Specified Subjects

	Units of Credit
English (standard requirements for college entrance)	3
History (American and one other)	2
Mathematics (Algebra through Progressions; Plane Geometry)	2½
Science (any one from Group A below)	1

ELECTIVE SUBJECTS

Science and Vocational Subjects

Group A:	*Units of Credit*
Biology	½ or 1
Botany	½ or 1
Chemistry	½ or 1
General Science	½ or 1
Physics	½ or 1
Physiology and Hygiene	½ or 1
Zoölogy	½ or 1
Group B:	
Agriculture and Farm Practice	1 to 6
Civics and Social Science	½ to 2
Commercial Subjects	½ to 2
Drawing (freehand or mechanical)	½
Economics	1
Mechanic Arts	½ or 1
Mill Practice	½
Physical Geography	1

Foreign Languages:	*Units of Credit*
French	1 to 2
German	1 to 2
Latin	1 to 4
Spanish	1 to 2
History:	
English History	1
General History	1
Medieval and Modern History	1
Ancient History	1
North Carolina History	½

EXPLANATION

1. Only a half unit of credit is allowed for a science text alone; one unit is allowed when this is supplemented with laboratory. If full credit is asked, the applicant for admission must present a satisfactory notebook indicating the amount and character of the laboratory work done, certified by the teacher of the subject, the principal, or the superintendent of his school.

2. In Modern Languages, one unit of credit is allowed for each year's work. The first year's work should cover the grammar and about 200 pages of translation.

3. In Latin, one unit each is allowed for grammar and composition, Caesar (Books I-IV), Vergil (Books I-VI), and Cicero (six orations).

4. Standard high-school text-books are recommended for all subjects.

TWO-YEAR COURSES IN MECHANIC ARTS AND IN TEXTILE MANUFACTURING, AND THE ONE-YEAR COURSE IN AUTO MECHANICS

Ten high-school units are required for admission to the Two-Year Courses in Mechanic Arts and in Textile Manufacturing, and the One-Year Course in Auto Mechanics. Of these units, two in English, one in Algebra, and one in American History are prescribed; the remaining six are to be offered from the Elective Subjects as indicated.

TWO-YEAR COURSE IN PRACTICAL AGRICULTURE

The requirements for admission to the Two-Year Course in Practical Agriculture are Arithmetic through decimal fractions, English Grammar, and American History.

CERTIFICATES

Applicants for admission to the Freshman Class who present certified statements on the official College admission blanks from proper officials of high schools or other preparatory schools of approved standing that the applicant has satisfactorily completed the 15 units required by the College will be admitted without further examination. These certificates must be submitted to the Dean of the College for approval. It is of distinct advantage to the applicant to send in his certificate as early as possible.

Certificates mailed to the College should be directed to the Registrar's Office.

N. B.—No applicant will be registered until his certificate is presented in proper form.

ADVANCED CREDIT

Students who have attended colleges of approved standing will be allowed credit for work done upon the presentation of proper certificates to the Dean, who, with the heads of the departments concerned, will determine their value. None except entrance credit is allowed for work done in secondary schools without examination at the College.

COLLEGE ENTRANCE REQUIREMENTS IN LITERATURE

PART I. *The books presented for study are arranged in four groups, from each of which one selection is to be made.*

Group I. (Drama)—Shakespeare's *Macbeth; Hamlet.*

Group II. (Poetry)—Milton's *L'Allegro, Il Penseroso,* and *Comus;* the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

Group III. (Oratory)—Burke's *Speech on Conciliation with America;* Washington's *Farewell Address;* Webster's *First Bunker Hill Oration,* and Lincoln's *Gettysburg Address.*

Group IV. (Essays)—Carlyle's *Essay on Burns,* with a selection from Burns's *Poems;* Macaulay's *Life of Johnson.*

PART II. *Books prescribed for reading are arranged in five groups, from each of which at least two selections are to be made.*

Group I. (Classics in Translation)—The Old Testament, comprising at least the chief narrative episodes in *Genesis, Exodus, Joshua, Judges, Samuel, Kings,* and *Daniel,* together with the books of *Ruth* and *Esther;* the *Odyssey,* with the omission, if desired, of *Books I-V, XV, XVI;* the *Æneid.* The *Odyssey* and the *Æneid* should be read in English translations of recognized literary excellence. For any selection from this group a selection from any other group may be substituted.

Group II. (Drama)—Shakespeare's *The Merchant of Venice, As You Like It, Pulius Caesar.*

Group III. (Prose Fiction)—Dickens's *A Tale of Two Cities;* George Eliot's *Silas Marner;* Scott's *Quentin Durward;* Hawthorne's *House of Seven Gables.*

Group IV. (Essays, Biographies, etc.)—Addison and Steele's *Sir Roger de Coverly Papers;* Macaulay's *Lord Clive;* Parkman's *The Oregon Trail.*

Group V. (Poetry)—Coleridge's *The Ancient Mariner;* Scott's *The Lady of the Lake;* Tennyson's *The Coming of Arthur, The Princess,* or *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Browning's *Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in the City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus," Instans Tyrannus;* Arnold's *Sohrab and Rustum.*

NOTE.—Above is given the "Restricted List" of books for reading; the "Comprehensive List" can be had from publishers of text-books.

SESSION

The College session lasts nine months, and opens annually the first Wednesday in September and closes the last Tuesday in May, with a vacation of about two weeks at Christmas.

WASTE AND BREAKAGE

In order to promote greater care on the part of students in their use of college supplies and their treatment of college property, a deposit of $5 is required of each student to cover unnecessary breakage and waste. All losses due to carelessness and wanton destruction will be charged to this fund, and whatever balance remains at the end of the session will be returned.

EXPENSE

The total college expense of a Freshman student need not exceed $375.

The total college expense of a Freshman student having a scholarship need not exceed $330.

These amounts include cost of board, tuition, lodging, fuel and lights, fees and deposits, books, drawing instruments, laundry, and a moderate allowance for incidentals. They do not include allowance for clothing, pocket money, and contingencies.

It is suggested that the allowances which parents make their sons for contingencies and spending money should be kept small. Small allowances take away temptation to unwise living.

DETAILED INFORMATION

The largest payment is made in September. On entrance, a Freshman student will need $150 to meet all of his various payments for the first month. But of this amount a payment of $22.50 for tuition may be deferred, if desired, to the first of November. This will reduce the first or entrance cost to $122.50. The $150 includes payment to the College of $124.50, of which $55 is a deposit for military equipment, uniform, and breakage, refundable in whole or in part as the property may be returned in good or in damaged condition. In the case of day students, or students rooming and boarding out of College, tuition will be paid on entrance.

Board is $19 per month, payable in advance on the first day of each calendar month from September through May. Board for

less time than one month is charged for at the rate of 75 cents a day, or $4.75 per week. Refunds for board will be made on the basis of these charges.

Students withdrawing from College within ten days from date of entrance will have refunded to their parents or guardians all money paid by them to the College Bursar except charges for board and lodging during the time they are in College. In special cases the right is reserved to modify or revoke this rule.

Refunds to students withdrawing later than ten days from date of entrance will be made in proportion to the length of time the students are in College. The right in special cases to modify or to revoke this rule is reserved.

Itemized Expense by Months

SEPTEMBER: Room rent, fuel, and lights, $20; incidental fee, $2; medical and hospital fee, $3; lecture fee, $1; Library fee, $1; furniture fee, $2; physical culture fee, $5; Y. M. C. A. fee, $2; military equipment and uniform deposit, $50; waste and breakage deposit, $5; board for September, $16; a total of $106 to be paid to the College. Tuition for one-half session, $22.50, may be paid at this time, which will make a total of $128.50 to be paid to the College. Thirty-five dollars is required to buy books and drawing instruments and for incidentals.

OCTOBER: Board, $19.

NOVEMBER: Board, $19; tuition, if it was not paid in September, $22.50.

DECEMBER: Board, $13.50, through the 21st.

JANUARY: Tuition, $22.50; lodging and fuel and lights, $20; medical and hospital fee, $3; furniture fee, $2; physical culture fee, $5; Y. M. C. A. fee, $2; board, $17.50. A total of $72.

FEBRUARY: Board, $19.

MARCH: Board, $19.

APRIL: Board, $19.

MAY: Board, $18.50.

Class Fees and Deposits

Fees and deposits for laboratory work and for supplies vary with the class, the course, and the division. They will not be collected at time of registration, but later as required by the various departments of instruction. The amount of these fees and deposits is given in the following tables for all classes and courses. Changes and variations will be made at any time where the need is indicated.

FEES AND DEPOSITS FOR AGRICULTURAL STUDENTS

	Senior	Junior	Sophomore	Freshman
General Agriculture	Farm Crops....$2	Soils....$2 Bacteriology.... 3 Farm Crops.... 2 Entomology.... 1 Plant Disease.... 1 Veg. Gard.... 1 Fruit Growing.. 1 Zoology.... 2 —	Plant Propagation....$1 Dairying.... 3 Chemical Lab.. 3 Physics.... 1 Zoology.... 2 —	Botany....$2 Chemical Lab.. 2 Woodwork.... 1 Drawing.... 1 —
	2	13	10	6
Farm Crops	Farm Crops....$2	Soils....$2 Fruit Growing.. 1 Entomology.... 1 Bacteriology.... 3 Botany.... 1 Farm Crops.... 2 Zoology.... 1 —	Same as General Agriculture	Same as General Agriculture
	2	11		
Animal Husbandry and Dairying	Zoology....$2	Vegetable Gardening....$1 Plant Disease.... 1 Soils.... 2 Farm Crops.... 2 Entomology.... 1 Fruit Growing.. 1 Bacteriology.... 3 Zoology.... 1 —	Same as General Agriculture	Same as General Agriculture
	2	12		
Horticulture	....	Soils....$2 Pruning.... 1 Vegetable Gardening.... 1 Entomology.... 1 Farm Crops.... 2 Plant Disease.... 1 Bacteriology.... 3 Zoology.... 1 —	Same as General Agriculture	Same as General Agriculture
		12		

FEES AND DEPOSITS FOR AGRICULTURAL STUDENTS—Continued

	Senior	Junior	Sophomore	Freshman
Agricultural Chemistry	Chemistry $6	Soils $2 Bacteriology 3 Chemistry 6 11	Same as General Agriculture	Same as General Agriculture
Agricultural Engineering	Farm Surv. and Ter. $1 Tractors 2 Research 3 6	Farm Mach. $1 Farm Motors 1 Farm Bldgs. 2 4	Same as General Agriculture	Same as General Agriculture
Vocational Education		Soils $2 Pruning 1 Plant Disease 1 Bacteriology 3 Entomology 1 Farm Crops 1 Vegetable Gardening 1 Zoology 1 11	Same as General Agriculture	Same as General Agriculture
Veterinary	Anatomy $2 Materia Medica 1 Pathology 1 Chemistry 2 Zoology 2 8	Farm Crops $2 Histology 1 Anatomy 2 Chemistry 3 Bacteriology 3 Zoology 1 12	Same as General Agriculture	Same as General Agriculture
Poultry	Poultry $2 Zoology 2 4	Bacteriology $3 Pruning 1 Entomology 1 Vegetable Gardening 1 Soils 2 Farm Crops 2 Plant Disease 1 Zoology 1 12	Same as General Agriculture	Same as General Agriculture

FEES AND DEPOSITS FOR AGRICULTURAL STUDENTS—Continued

	Senior	Junior	Sophomore	Freshman
Biology	Bacteriology...$3 Zoology..... 4 — 7	Soils.....$2 Farm Crops.... 2 Bacteriology... 3 Entomology... 1 Zoology..... 2 Botany..... 3 Anatomy..... 2 Plant Disease.. 1 — 16	Same as General Agriculture	Same as General Agriculture
Soils	Chemistry..$0.75 Soils..... 1.50 2.25	Soils.....$2 Chemistry..... 3 Pl. Physiol..... 3 Bacteriology... 3 Zoology..... 2 Plant Diseases. 1 Entomology... 1 15	Same as General Agriculture	Same as General Agriculture

FEES AND DEPOSITS FOR ENGINEERING STUDENTS

	Senior	Junior	Sophomore	Freshman
Civil Engineering	Drawing.....$1 — 1	Drawing.....$1 — 1	Drawing.....$1 Physical Lab... 1 — 2	Physical Lab...$1 Shop and Drawing..... 2 Chemical Lab.. 2 — 5
Mechanical Engineering	Shop and Drawing.....$2 M. E. Lab..... 1 — 3	Shop and Drawing..$2.50 — 2.50	Physical Lab...$1 Shop and Drawing..... 2 — 3	Same as C. E.
Electrical Engineering	E. E. Lab.....$2 — 2	Direct Current Lab.....$2 M. E. Lab..... 1 — 3	Same as M. E.	Same as C. E.

FEES AND DEPOSITS FOR ENGINEERING STUDENTS—Continued

	Senior	Junior	Sophomore	Freshman
Chemical Engineering	Chemistry $10	Chemistry $6	Physical Lab...$1 Chemical Lab.. 4	Physical Lab...$1 Chemical Lab.. 2 Botany..... 1 Shop and Drawing..... 2
	10	6	5	6
Textile Engineering and Manufacturing	Design.....$3 Dyeing..... 3	Design.....$3 Dyeing..... 3	Phys. Lab.....$1 Design..... 4 Chem. Lab..... 2 Drawing..... 1	Chemical Lab..$2 Drawing..... 1
	6	6	8	3
Textile Dyeing	Chemistry.....$8 Dyeing..... 3	Chemistry.....$6 Dyeing..... 3	Physical Lab...$1 Chemical Lab.. 2 Drawing..... 1	Chemical Lab..$2 Drawing..... 1
	11	9	4	3

FEES AND DEPOSITS FOR SHORT COURSES

Two-year Course in Agriculture

Farm Shop	$2.00
Farm Mechanics	2.00
Fruit Growing	1.00
Pruning and Spraying, Rehabilitation	1.00

Two-year Course in Mechanic Arts

First Year:

Shop and Drawing	$2.00

Second Year:

Shop and Drawing	2.00

Two-year Course in Textile Industry

First Year:

Designing	$4.00
Drawing	1.00
	$5.00

SECOND YEAR:

Designing	$3.00
Dyeing	3.00
Shop	1.00
	$7.00

NOTE.—The College Bursar is forbidden by the Trustees to give credit.

All unused deposits are refunded to the student at the end of the session or upon his withdrawal from College. If he has overdrawn his deposit he is required to pay the amount of the overdraft.

If the student has a scholarship, he does not pay tuition.

Students entering after September will pay on entrance all the items enumerated under "September," less a credit in part for board and room rent.

WHAT A STUDENT NEEDS FOR HIS ROOM

The College rooms are supplied with necessary furniture. Each student, however, should bring with him two pairs of blankets, two pairs of sheets, one pillow and two cases, and two bedspreads for a single bed.

SCHOLARSHIPS CARRYING FREE TUITION

1. Regular Scholarships. When the College was chartered the Legislature required the Trustees to admit, free of tuition, one hundred and twenty young men. The only conditions attached to these scholarships are that they shall go to young men (1) who are unable to pay for all their education, and (2) who are of excellent moral character. As far as possible, these appointments are distributed among the different counties. Appointments are made by the President of the College, after inquiries as to the needs and character of applicants and after a written recommendation from a member of the Legislature from the applicant's county. Certificates of inability to pay have to be made by the applicant and his parents. Blanks are furnished for this purpose.

2. Agricultural Scholarships. The Legislature of 1913 authorized the College Trustees to give a limited number of agricultural scholarships to students who agree to teach for two years in an agricultural school, or to serve in an agricultural experiment sta-

tion, or to farm in the State for two years after graduation. The same conditions as to financial inability and moral worth go with these scholarships as with the regular ones.

3. Textile Scholarships. During the past year a number of scholarships have been awarded by cotton mills and individuals to students taking the textile course. These scholarships have been awarded as an encouragement to young men to take the textile course and a recipient must have a good record both in scholarship and deportment. Scholarships are known by the names of the donors and are as follows: Ten Aberfoyle Scholarships by Aberfoyle Manufacturing Co., Chester, Penn.; one Chadwick-Hoskins Scholarship by Chadwick-Hoskins Co., Charlotte, N. C.; one Draper Scholarship by Mr. Arthur J. Draper, Charlotte, N. C.; one Harriss Scholarship by Mr. W. H. Harriss, New York City; one Tolar Hart & Holt Scholarship by Tolar Hart & Holt Mills, Fayetteville, N. C.; one Miller Scholarship by Mr. R. M. Miller, Jr., Charlotte, N. C.

4. Finley Loan Fund. As a memorial foundation to William Wilson Finley, President of the Southern Railway Company at the time of his death, that company has established a Finley Loan Fund for needy students of agriculture. The fund consists of $1,000. This will be lent to students who are making their way through college, and returned by them to the fund after they have finished college and gone to work. It will be administered by the Bursar of the College and all beneficiaries will be named by the College.

SELF-HELP

Some students who are alert and energetic frequently earn part of their expenses in college. Some of the agricultural students find work at odd hours on the farm, in the orchard, in the barn, in the dairy. Some students act as agents for merchants and pressing clubs. The College employs a few students in the dining room and elsewhere. A student's ability to help himself will depend largely on his own power to find work and to hold it after he finds it. It must, however, be remembered that the duties of the classroom take most of a student's time. As College duties begin at 8 a. m and do not end until 4:30 p. m., hours for remunerative work are very limited.

STUDENT LOAN FUND

The Alumni Association of the College established in the year 1900 a small fund to be lent to needy students of talent and char-

acter. This has been augmented from various sources and now amounts to about $7,000. The loans are made at 6 per cent, and good security is required. Sufficient time for repayment is given to enable the student to earn the money himself. The amount lent to each student is limited. The purpose is to help young men who are willing to help themselves and who cannot find sufficient employment while in college to meet all their necessary expenses.

Contributions are solicited for this fund from students, alumni, and friends of education generally. The fund is administered by the College Bursar, under the direction of the President.

TIME OF REGISTRATION

All students are required to register within twenty-four hours after reaching Raleigh. A failure to comply with this rule may lead the Faculty to decline to allow an applicant to register. A registration fee of $5 will be charged to students failing to register on the days appointed.

ABSENCES FROM COLLEGE

The College authorities wish to emphasize the danger of allowing the students' work to be interrupted by unnecessary absences from College. Students wishing to visit their homes will be required to present requests from their parents, addressed to the Commandant. It should be remembered that all time missed must be made up, under disadvantages. Absences from college usually mean the accumulation of extra work for the student to do. Most students have their time fully occupied with regular work. It is, therefore, especially important that students who are not carrying their work well shall not run up absences. Nor should it be forgotten that students who are doing well in their studies lose much by absences from their regular duties here, not only in time actually lost but also in the attendant distraction from their work.

BOARD AND LODGING

All students are required to board in the College dining hall or in approved boarding houses near the College, and to room in the College dormitories. An abundant supply of plain, nourishing food, with as large a variety as possible, is furnished absolutely at cost. The charge at present is $19 per month, payable in advance.

Rooms in the College dormitories are supplied with electric lights, steam heat, and all necessary furniture except sheets, blankets, pillowcases, pillows, bedspreads, and towels, which each student must furnish for himself. The charge for lodging is by the month, and there is no reduction in case of withdrawal.

ROOMS

Dormitory accommodations at the College are sufficient now to provide for seven hundred students. The assignment of available rooms will be made on August 25th to young men who shall have applied for them, provided they are entitled to admission to College. Applicants for rooms will be furnished by the Registrar's office with blank forms for these applications. These blanks will carry some brief explanations, with rules regarding applications and assignments. It will be understood that these assignments are to be regarded as temporary until the military companies are formed during the first week of school. Many of these assignments will doubtless stand, but the permanent assigning of rooms will be made by the Commandant, who will take charge of room assignments when registration of students begins on the 7th of September.

MILITARY TRAINING

Under the provisions of an Act of Congress, June 3, 1916, a unit of the "Reserve Officers' Training Corps" has been established.

Students, physically fit, becoming members of the corps, will receive an allowance for uniforms from the Government.

The Corps was established in 1917 in order to qualify students to become reserve officers of the United States Army. The training is given with the least possible interference with their civil careers, so that in time of national emergency there may be a sufficient number of educated men trained in military science and tactics to officer and lead intelligently the units of the large armies upon which the safety of the country will depend. The Corps will be considered as a Federal organization for the above purpose only. There is no obligation to become a part of the National Guard or of the Regular Army; no oath is taken that service will be required other than for the purpose of education. A training camp will be held for six weeks at the end of each academic year, the expense of these camps to be borne by the Government, each student receiving five cents per mile going to and from camp, suitable uniforms and subsistence, and one dollar

a day while in attendance. This camp is required of Juniors taking R. O. T. C., and is optional with other classes.

Not less than three hours weekly are devoted to this military training during the Freshman and Sophomore years, and five hours weekly during the Junior and Senior years. Beginning with the Junior year, such students as have completed satisfactorily the Freshman and Sophomore work, may, if they wish and if selected by the President of the Institution and the Professor of Military Science and Tactics, undertake the five hours a week course. These students will be given, in addition to the allowance on their uniforms, an allowance (at present, 1920-21, fifty-three cents per day) as commutation of rations, and includes the vacation period between the third and fourth years, deducting for the time spent in camp. This amount will, however, not be paid until the student enters upon his fourth year.

Upon completion of the military training course to the satisfaction of the College authorities, graduates become eligible for commission in the Officers' Reserve Corps of the U. S. Army, but there is no obligation to accept such commissions.

Military Drill and Science, four hours weekly, are required of all Freshmen and Sophomores. Advanced R. O. T. C. work is optional in the upper classes.

In war time reserve officers may be appointed to a grade not below that of second lieutenant in any forces raised for national emergencies.

In the Military Training it is not the intention to install complete and rigid application of military discipline and methods to the instruction of the students and to their daily life. However, the following characteristics of an officer and a gentleman, which are inculcated by a proper disciplinary training, will be insisted upon; neatness in dress, the cultivation of the manners and habits of a gentleman, a dignified and military bearing, loyalty, truthfulness, punctuality, kindliness, earnestness of purpose, and devotion to duty; the cultivation in the student body of esprit de corps, obedience of orders, acceptance of responsibility, and avoidance of excuses.

CARE OF THE SICK

Every effort is made to protect the health of young men in the College. Regular inspections of the entire institution are made once a year, or oftener, by the State Board of Health. Similar inspections are made monthly by the College Physician.

Each student has a regular routine of daily life, including abundant physical exercise in the shops and on the drill grounds.

In case of sickness, a student is taken immediately to the College Infirmary, where he receives medical attention and careful nursing.

The College physician visits the Infirmary daily at 3 p. m., and in cases of serious illness, as frequently as may be required.

A trained nurse has charge of the Infirmary at all times. The payment of the medical fee entitles a student to all the privileges of the Infirmary; and this includes the regular visits of the College Physician for all ordinary sickness. If a special nurse is needed in case of serious contagious disease or in case of other serious illness, parents are of course expected to pay such nurse or nurses. The medical fee does not cover special surgical operations or the attention of any medical specialist.

VACCINATION

By direction of the Trustees, no young man will be registered unless he has been successfully vaccinated within the past two years. The College greatly prefers that all applicants for admission should be vaccinated at home, and that a certificate of successful vaccination within the past two years be brought from the family physician. In case this cannot be done, the College Physician will vaccinate applicants before they are registered at the College, and a fee will be charged for vaccination. A blank form to be filled by the home physician will be mailed on application. It will save a great deal of time and trouble, therefore, to be vaccinated before applying for registration. In this way applicants will avoid the inconvenience and discomfort resulting from vaccination while at College. The size of scar resulting from a previous vaccination is not proof that revaccination is not needed.

MEDICAL EXAMINATION

Every student will be given a physical examination before his registration is completed, this examination being conducted by the College Physician or by a medical officer detailed by the War Department. It is suggested that every student get himself in the best possible physical condition so that he may begin his work without any avoidable physical handicap. The object of this examination is to discover any physical defects and to take proper steps to correct them.

TYPHOID INOCULATION

Believing that students may be safeguarded from typhoid fever by inoculation against this disease, to which young people are peculiarly susceptible, the College offers this preventive free of charge, and urges, but does not require, all of its new students to take the treatment. Parents are requested to join the College in recommending that their sons be inoculated here or to have them inoculated at home.

COURSES OF INSTRUCTION

The College offers courses of instruction in the following subjects:

I. Agriculture.

- **a. Four-year Course in General Agriculture.**
- **b. Four-year Specialized Courses in Agricultural Engineering, Animal Husbandry, Farm Crops, Horticulture, Vocational Education, Poultry Science, Biology, Soils, Veterinary Medicine, and Agricultural Chemistry.**
- **c. Two-year Course in Practical Agriculture.**
- **d. Winter Course in Agriculture.**

II. Engineering, Mechanic Arts, and Chemistry.

- **a. Four-year Course in Chemistry.**
- **b. Four-year Course in Civil Engineering.**
- **c. Four-year Course in Electrical Engineering.**
- **d. Four-year Course in Mechanical Engineering.**
- **e. Two-year Course in Mechanic Arts.**

III. Textile Courses.

- **a. Four-year Course in Textile Engineering.**
- **b. Four-year Course in Textile Manufacturing.**
- **c. Four-year Course in Textile Chemistry and Dyeing.**
- **d. Two-year Textile Course.**

IV. Summer School.

A six-weeks Summer School for Teachers, for School Officials, and for candidates for admission to College. The work is adapted to the needs of teachers of primary, grammar, and high school grades.

V. Graduate Courses.

Extending over one or more years and leading to advanced degrees. These are intended for students who have completed the four-year course and who desire further instruction and training in special subjects.

Degrees.

The four-year courses offer a combination of practice and theoretical work, about half the time being devoted to lectures and recitations, and the other half to work in the shops, laboratories, drawing rooms, greenhouses, dairies, poultry yards, fields, and

mills. They are intended to furnish both technical and liberal education. The degree of Bachelor of Science is conferred upon a graduate of the four-year courses in Agriculture, in Chemistry, and in Dyeing; and the degree of Bachelor of Engineering is conferred upon a graduate of the four-year Engineering course, or the four-year Textile course.

The short courses include nearly all of the practical work of the four-year courses with less theoretical instruction. They are intended for students who desire chiefly manual training. They do not lead to a degree.

FOUR-YEAR COURSES

I. Agricultural Courses.

a. Four-year Course in General Agriculture.

b. Four-year Specialized Courses in Agricultural Engineering, Animal Husbandry, Farm Crops, Horticulture, Vocational Education, Poultry Science, Biology, Soils, Veterinary Medicine, and Agricultural Chemistry.

AGRICULTURAL COURSES

The Agricultural Courses are so organized and arranged that they will enable students to acquire a correct knowledge of agriculture as an applied science, and at the same time become proficient in the best agricultural practices. The subjects taught in the first two years of the courses are fundamental and cultural, and give the information and training necessary for the best attainment and utilization of the technical work given as the courses progress. Thus the curricula of all the Agricultural Courses include English, Mathematics, Chemistry, Physics, Botany, Zoology, Geology, Soils, etc. Beginning with the Junior year, all students will be required to take the prescribed basic work in Agriculture, but each may choose his electives in the course in General Agriculture to fit himself better as a general farmer, or in one of the specialized courses—Farm Crops, Animal Husbandry, Horticulture, Soils, Vocational Education, Agricultural Engineering, Poultry Science, Biology, or Agricultural Chemistry—to prepare himself for some professional line of Agriculture. It is felt by the College that increasingly larger numbers of young men taking Agriculture each year will find it wise to prepare themselves better to return to the farm by taking the General Course in Agriculture rather than for professional work by taking one of the specialized courses.

Instruction is given by text-books, lectures, and reference readings, and in laboratories, fields, orchards, gardens, barns, dairy, and poultry yards. Opportunity is given for specialization as the courses progress, that the student may become more proficient in his chosen work.

Young men who have completed one of the Agricultural Courses of instruction with good credit have exceptional opportunities for remunerative employment in many positions. In addition to the preparation given for the successful operation of their own farms, graduates in Agriculture may become farm managers, demonstra-

tion agents, teachers of agriculture and science in farm-life and other rural schools, orchardists, dairymen, or poultrymen, and may fill many other responsible positions requiring technical training. Many State College graduates hold responsible positions in colleges, experiment stations and extension bureaus, and in various offices of the United States Department of Agriculture.

The four-year course in Agricultural Chemistry is described more fully under the head of Chemical Courses.

FOUR-YEAR COURSES IN AGRICULTURE*

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Agricultural Engineering, 102	0	0	4	6
Animal Husbandry, 101	2	3	0	0
Botany, 101-102	5	7	5	7
Citizenship, Economics, 101	2	3	0	0
Chemistry, 101-102	2	2	2	2
Chemistry, Laboratory, 103-104	1	2	1	2
Composition and Rhetoric, English, 101-102	3	3	3	3
Farm Crops, 102	0	0	3	4
Mathematics, 101 (a)	3	3	0	0
Military Art, 101-102	3	4	3	4
Totals	21	27	21	28

Sophomore Year

Chemistry, Analytical, 201	3	5	0	0
Chemistry, Organic, 204	0	0	2	2
Chemistry, Organic, Laboratory, 206	0	0	1	3
Dairying, A. H., 202	0	0	3	3
English, 201-202	3	3	3	4
Geology, Soils, 202	0	0	3	4
Physics, 207-208	3	4	3	4
Plant Propagation, Horticulture, 201	3	4	0	0
Poultry, 201	3	4	0	0
Zoology, 201-202	3	5	3	5
Military Art, 201-202	3	4	3	4
Totals	21	29	21	29

*(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Bacteriology, Botany, 302	0	0	3	4
Economics, General, 301	3	3	0	0
Entomology, Zoology, 306	0	0	3	5
Animal Nutrition, A. H., 301	3	4	0	0
Genetics, Zoology, 302	0	0	3	4
Plant Diseases, Botany, 301	3	4	0	0
Soils, 301-302	3	4	3	4
	12	15	12	17
Minimum electives	9		9	
	21		21	
Military Art, 301-302	4	5	4	5
French, Mod. Lang., 301-302	2	2	2	2

Senior Year

Farm Practices, 401	1	1	0	0
Agricultural Economics, Econ., 401	3	3	0	0
Farm Equipment, Agr. Eng., 401	3	4	0	0
Farm Management, F. C., 402	0	0	3	4
Fertilizers, Soils, 402	0	0	3	4
Veterinary Hygiene and Sanitation, Vet., 401	3	4	0	0
	10	12	6	8
Minimum electives	10		14	
	20		20	
Military Art, 401-402	4	5	4	5

ELECTIVES

GENERAL AGRICULTURE

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Farm Machinery, Agr. Eng., 301	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
	6	8	6	8
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Surveying and Terr., Agr. Eng., 403	3	4	0	0
Marketing, Econ., 402	0	0	3	3
Cotton and Tobacco, F. C., 403	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
	6	8	6	8
Minors (see page 73)	4		8	
Total electives	10		14	

AGRICULTURAL ENGINEERING

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Farm Machinery, Agr. Eng., 301	3	4	0	0
Farm Buildings and Concrete, Agr. Eng., 303	3	4	0	0
*	0	0	2	4
Farm Motors, Agr. Eng., 306	0	0	3	5
Farm Mechanics, Agr. Eng., 308	0	0	1	3
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Surveying and Terracing, Agr. Eng., 403	3	4	0	0
Tractors, Agr. Eng., 405	2	3	0	0
Advanced Testing, Agr. Eng., 407	1	3	0	0
Farm Light Plants, etc., Agr. Eng., 404	0	0	2	3
Research of Tractor, Machinery, etc., Agr. Eng., 406	0	0	2	3
Pumps and Power Prob., Agr. Eng., 408	0	0	2	3
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

* Course to be arranged.

ANIMAL HUSBANDRY

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Sheep Production, A. H., 303	3	4	0	0
Swine Production, A. H., 305	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
Legumes and Grasses, F. C., 302	0	0	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Meats and Stock Farm Management, A. H., 402	0	0	3	4
Dairy Cattle and Milk Production, A. H., 401	3	4	0	0
Animal Breeding, A. H., 403	3	4	0	0
Pedigree Study, A. H., 404	0	0	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

BIOLOGY

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Advanced Plant Morphology, Bot., 303-304	3	4	3	4
Comparative Anatomy, Zool., 303-304	3	4	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Systematic Botany, Bot., 406	0	0	3	4
Advanced Plant Physiology, Bot., 403	3	4	0	0
Embryology, Zool., 401	3	4	0	0
Apiculture, Zool., 404	0	0	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

FARM CROPS

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Cereals, F. C., 301	3	4	0	0
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
Advanced Farm Crops, F. C., 304	0	0	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Cotton and Tobacco, F. C., 403	3	4	0	0
Crop Improvement, F. C., 405-406	3	4	3	4
Marketing, Econ., 402	0	0	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

EDUCATION (VOCATIONAL)

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Introduction to Education, Voc. Ed., 301-302	3	4	3	4
Farm Cost Accounting, F. C., 303	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Education, Voc. Ed., 401-402	3	4	3	4
Education, Voc. Ed., 403-404	3	4	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

POULTRY SCIENCE

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Poultry Breeds and Judging, Poul., 301	3	4	0	0
Advanced General Poultry, Poul., 302	0	0	3	4
Poultry Anatomy, Poul., 305-306	3	4	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Poultry Diseases, Poul., 401	3	4	0	0
Specialized Poultry Markets, Poul., 402	0	0	3	4
Incubation and Brooding, Poul., 404	0	0	3	4
Poultry Accounting, Poul., 403	1	1	0	0
Poultry Seminar, Poul., 405	2	2	0	0
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

SOILS

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Chemistry, 315-316	3	4	3	4
Advanced Pl. Physiology, Bot., 403	3	4	0	0
Soil Survey, 304	0	0	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Physical Chemistry, 413	3	5	0	0
Soil Analysis, Chem., 414	0	0	3	5
Advanced Soils, 403-404	3	4	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

HORTICULTURE

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Majors:				
Pomology, Hort., 301	3	4	0	0
Pruning and Spraying, Hort., 302	0	0	3	4
Farm Forestry, Hort., 303	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
	6		6	
Minors (see page 73)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Vegetable Forcing, Hort., 401	3	4	0	0
Systematic Pomology, Hort., 403	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
Horticultural Seminar, Hort., 404	0	0	3	4
	6		6	
Minors (see page 73)	4		8	
Total electives	10		14	

MINORS

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Farm Machinery, Agr. Eng., 301	3	4	0	0
Farm Buildings and Concrete, Agr. Eng., 303	3	4	0	0
Farm Motors, Agr. Eng., 306	0	0	3	5
Swine Production, A. H., 305	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
Sociology, Econ., 304	0	0	3	3
Introduction to Education, Voc. Ed., 301-302	3	4	3	4
Cereals, F. C., 301	3	4	0	0
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
Fruit Growing, Hort., 305	3	4	0	0
Farm Forestry, Hort., 303	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
Adv. Poultry Breeds and Judging, 304	0	0	3	4
Adv. General Poultry, 302	0	0	3	4
Soil Survey, 304	0	0	3	4
Economic Zoology, 307-308	3	4	3	4
Agr. Journalism and Correspondence, English, 303-304	3	3	3	3

Senior Year

Farm Surveying and Terracing, Agr. Eng., 403	3	4	0	0
Tractors, Agr. Eng., 405	2	3	0	0
Dairy Cattle and Milk Production, A. H., 401	3	4	0	0
Animal Breeding, A. H., 403	3	4	0	0
Systematic Botany, Bot., 406	0	0	3	4
Advanced Plant Physiology, Bot., 403-404	3	4	or 3	4
Advanced Bacteriology, Bot., 401	3	4	0	0
Plant Ecology, Bot., 410	0	0	3	4
Rural Sociology, Econ., 403	3	3	0	0
Marketing, Econ., 402	0	0	3	4
Cotton and Tobacco, F. C., 403	3	4	0	0
Types of Farming in N. C. and U. S., F. C. 404	0	0	2	2
Small Fruits, Hort., 406	0	0	3	4
Plant Breeding, Hort., 405	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
French, Mod. Lang., 305-306	3	3	3	3
Incubation and Brooding, Poul., 404	3	4	or 3	4
Advanced Soils, 403-404	3	4	3	4
Animal Diseases, Vet., 410	0	0	2	3
Rural Sanitation, Zool., 405-406	1	1	1	1
Scientific Illustrating, Zool., 407	3	4	0	0
Scientific Photography, Zool., 408	0	0	3	4
Embryology, Zool., 401-402	3	4	or 3	4
Apiculture, Zool., 403-404	3	4	or 3	4
Horse, Mule, and Beef Production, A. H., 405	3	4	0	0
Seminar, Voc. Ed., 405-406 (Elective for Sen. in Voc. Ed. only.)	1	1	1	1

FOUR-YEAR COURSE IN AGRICULTURAL CHEMISTRY

Junior Year*

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Bacteriology, Botany, 302	0	0	3	4
Economics, General, 301	3	3	0	0
Animal Nutrition, A. H., 301	3	4	0	0
Genetics, Zool., 302	0	0	3	4
Soils, 301-302	3	4	3	4
Chemistry, Organic, 301	3	3	0	0
Chemistry, Physiological, 312	0	0	2	2
Chemistry, Physiological Laboratory, 314	0	0	1	2
Chemistry, Quantitative Agricultural Anaylsis, 305-306	3	6	3	6
	15	20	15	20
Minimum Electives	6		6	
Totals	21		21	
Electives				
Military Art, 301-302	4	5	4	5
French, Mod. Lang., 301-302	2	2	2	2
or six peroids from the following:				
Plant Diseases, Botany, 301	3	4	0	0
Entomology, Zoology, 306	0	0	3	5
Agricultural Journalism and Correspondence, Eng., 303-304	3	3	3	3
Introduction to Education, 301-302	3	4	3	4
Chemistry, Organic Laboratory, 303-304	1	3	1	3
Sociology, Econ., 304	0	0	3	3

*Freshman and Sophomore years are the same as for the four-year courses in Agriculture.

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Agricultural Economics, 401	3	3	0	0
Fertilizers, Soils, 402	0	0	3	4
Agricultural Physical Chemistry, 413	3	5	0	0
Soil Analysis, Chem., 414	0	0	3	5
Chemistry, Historical, 401	2	2	0	0
Chemistry, Industrial, 402	0	0	2	2
Chemistry, Inorganic, 404	0	0	2	2
Chemistry, Microanalysis, 403	2	4	0	0
	10	14	10	13
Minimum Electives	10		10	
Totals	20		20	
Electives				
Military Art, 401-402	4	5	4	5
Rural Sociology, Econ., 403	3	3	0	0
Marketing, Econ., 402	0	0	3	4
French, Mod. Lang., 305-306	3	3	3	3
Advanced Soils, 403-404	3	4	3	4
Rural Sanitation, Zool., 405-406	1	1	1	1
Types of Farming in U. S. and N. C., F. C., 404	0	0	2	2
Advanced Bacteriology, Bot., 401	3	4	0	0
Quantitative Chemical Analysis, 409-410	3	6	3	6
Organic Chemical Laboratory, 303-304*	1	3	1	3
Organic Chemistry, 411-412	3	5	3	5

*If not elected in the Junior year this work must be taken in the Senior year.

FOUR-YEAR COURSE IN VETERINARY MEDICINE

Junior Year*

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Cereals, Farm Crops, 301	3	4	0	0
Anatomy, Veterinary Medicine, 301-302	6	9	4	6
Bacteriology, Botany 302	0	0	3	4
Chemistry (Quantitative), 305	3	4	0	0
Chemistry (Physiological), 312-314	0	0	3	4
Genetics, Zool. 302	0	0	3	4
Animal Nutrition, A. H. 301	3	4	0	0
Swine Production, A. H. 305	3	4	0	0
Stock Judging, A. H. 304	0	0	3	4
Histology, Vet. Medicine 303-304	3	4	3	4
Materia Medica, Vet. Med. 306	0	0	2	4
	21	29	21	30

Senior Year

Animal Breeding, A. H. 403	3	4	0	0
Anatomy, Vet. Med. 405-406	5	7	6	9
Medical Botany, Bot. 408	0	0	2	4
Dairy Cattle and Milk Production, A. H. 401	3	4	0	0
Embryology, Zool. 402	0	0	3	4
Pathology, Vet. Med. 407-408	3	4	3	4
Materia Medica and Pharmacy, Vet. Med. 402	0	0	3	4
Physiology, Vet. Med. 403-404	3	3	3	3
Farm Equipment, Agr. Eng. 401	3	4	0	0
	20	26	20	28

*Freshman and Sophomore years are the same as for the four-year courses in Agriculture.

SHORT COURSES

I. TWO-YEAR PRACTICAL COURSE IN AGRICULTURE

This course is designed to assist those who wish to become better farmers of different kinds, and who for one reason or another are unable to take any of the four-year courses in Agriculture offered by the College. It is planned in this course to provide a large amount of practical information and training in Agriculture. In teaching, emphasis will be given to better methods of general farming, stock raising, dairying, vegetable growing, and orcharding, and to the efficient use of farm implements and machinery. Considerable time will be devoted to the best methods of fighting and controlling insect and disease enemies of crops and farm animals; to pruning and spraying; to farm carpentry, machinery, and conveniences; to soils and soil fertility; to the selection, growing, improvement, and marketing of the more important field crops; to poultry raising; to farm law; to farm organization and management; to the feeding, breeding, and management of farm animals; to the growing, handling, and selling of vegetable and orchard products; to the keeping of farm accounts; to rural-life questions; and to many other problems that are constantly coming up for solution on North Carolina farms. In connection with the studies, intensive practical work will be carried on in the fields, at the barns, in the dairy, and in the orchard, so as to thoroughly familiarize those taking the course with the applications of the subjects taught by doing the things themselves. Although there will be no entrance examination, applicants must be seventeen years of age and must satisfy the Dean of Agriculture that they are sufficiently prepared in common school subjects to enable them to pursue the course with profit.

Each student must also present an honorable discharge from the school last attended or such certificates and letters as may be requested. At least one year's farm experience or its equivalent will be essential to get most out of the course. Each person who completes the course in a satisfactory manner will be awarded a certificate. Credits secured in the course will not lead to a college degree.

Two-year Course in Practical Agriculture[1]

First Year

Subjects	First Term Periods	First Term Hours
English (Composition), 11	3	3
Farm Mathematics, 31	3	3
Plant Life, Botany 11	3	4
Breeds and Judging, Animal Husbandry 11	3	4
Corn and Small Grains, Farm Crops, 11	3	4
Agricultural Drawing, Agricultural Engineering 11	1	3
Farm Chemistry, Chemistry 11	3	4
Animal Life, Zoology 11	3	4
Military Art 101	3	4
	25	33

Subjects	Second Term Periods	Second Term Hours
English, 12	3	3
Farm Mathematics, 32	3	3
Plant Life, Botany 12	3	3
Legumes, Farm Crops 12	3	4
Farm Shop Work, Agricultural Engineering 12	1	3
Vegetable Growing, Horticulture 12	3	4
Animal Life, Zoology 12	3	4
Farm Chemistry, Chemistry 12	3	4
Military Art 102	3	4
	25	33

Second Year

Subjects	First Term Periods	First Term Hours
Farm Motors, Agricultural Engineering 21	3	4
Fruit Growing, Horticulture 21	3	4
Farm Insects, Zoology 21	3	4
Plant Diseases, Botany 21	3	4
Farm Poultry, Poultry 21	3	4
Feeds and Feeding, Animal Husbandry 21	3	4
Soils and Soil Fertility, Soils 21	4	6
Military Art 201	3	4
	25	34

[1]Eight weeks of supervised Farm Practice will be required of each student in this course, during the summer at the end of the first year.

Subjects	Second Term Periods	Hours
Farm Equipment, Agricultural Engineering 22	3	4
Farm Dairying, Animal Husbandry 22	3	4
Farm Management, Farm Crops 22	3	4
Rural Economic Organization, Economics 22	2	2
Rural Social Organization, Economics 32	2	2
Farm Accounting, Economics 42	2	2
Marketing Farm Products, Economics 52	2	2
Animal Diseases, Veterinary Medicine 22	2	3
Pruning and Spraying, Horticulture 22	3	4
Military Art, 202	3	4
	25	31

II. TWO WEEKS FARMERS' WINTER COURSE IN AGRICULTURE

This short course will deal in an intensely practical way with field and garden crops, soils, fertilizers, orcharding, poultry, livestock, diseases and insect enemies of crops and domestic animals, and farm management and equipment, including farm machinery and gas engines.

The instruction offered will be of the kind the energetic and ambitious farmer is seeking. The course will begin on January 6, 1922, and will continue for two weeks.

Two Weeks Farmers' Course in Agriculture

Subjects	Hours a Week
Field Crops	6
Fruit and Vegetable Growing	4
Farm Dairying and Types	6
Farm Insects	3
Diseases of Crops and Their Control	3
Soils and Fertilizers	4
Diseases of Livestock	3
Poultry	3
Gas Engines	3
Farm Tractors and Machinery	9
Total	44

III. COURSE IN AGRICULTURE FOR REHABILITATION STUDENTS

The course in Agriculture for rehabilitation students is somewhat similar to the other short courses in Agriculture. It is a study of the application of scientific principles to farming. This study consists of class discussion based on the experience of the men from farms, supplemented by information secured from successful farmers, the State Experiment Station, the Department of Agriculture, and the specialists of the College. Emphasis is to be put upon the field study and use of illustrative material. Practice work in such subjects as field crops, soils, livestock, poultry, vegetable and fruit growing, operation and repair of farm machinery, farm buildings, bee culture, and farm management will be emphasized in the rehabilitation courses.

For the men who will continue their studies, it is somewhat of a preparatory course. For those who will return to the farm it gives some understanding of the principles underlying their work, and brings them into contact with the agencies which serve the farmer—the State College, the Department of Agriculture, and the State Experiment Station. For men who have had no farm experience the course will be supplemented by additional field practice. Opportunity will be given these men to grow some of the common field crops and to care for some farm animals.

SPECIALIZATION

After finishing the fourth grade work, opportunity to specialize is limited mainly to the general Farm Crops, Animal Husbandry, Horticulture, and Poultry groups for those rehabilitation students taking the special rehabilitation course.

EMPLOYMENT UPON COMPLETING THE COURSE

Those students who own farms will probably wish to return to them.

Those who do not own farms will be given further training and experience to fit them to become farm managers or farm superintendents in their chosen lines. Positions will be found for these men by the Federal Board for Vocational Education.

The men who plan to take up farm demonstration work or to enter the service of the Department of Agriculture and who are promised four years of study will enter the regular agricultural courses as soon as they have the necessary preparation.

GRADING COURSE

This course is to consist of a part or all of the term in progress at the time the students begin the course. From the Grading Course, students are to be assigned to continue the Fourth Grade, of which this course is a part, or to whatever higher grade their scholarship will admit them.

(One Term)

GRADING COURSE	Hrs.
1. Reading and Writing	5
2. Arithmetic	5
3. Geography	5
4. Plant Life	5
5. Animal Life	5
	25

EXPLANATORY NOTES:

1. The year is to be divided into three terms of 16 weeks each.
2. The year is to begin September 1, and is to be divided as follows:
   First term, September 1 to December 22.
   Second term, December 29 to April 21.
   Third term, April 21 to August 11.
   Vacation, August 15-31.
3. Subjects are each to be allowed five hours a week.
4. Three subjects, or fifteen hours a week, are to constitute a normal amount of work in Agriculture.
5. Subjects in Agriculture are to be given on the basis of two hours recitation and one three-hour practice period whenever practical.
6. Men now here are to be allowed to take whatever subjects in these or even regular classes which they need in order to complete their courses and which in the opinion of their adviser they are best qualified to take.

Fourth Grade

FIRST TERM	*Hrs.*	SECOND TERM	*Hrs.*	THIRD TERM	*Hrs.*
1. Reading and Writing	5	Reading and Writing	5	Reading and Writing	5
2. Arithmetic	5	Arithmetic	5	Arithmetic	5
3. Geography	5	Geography	5	Drawing	5
4. Plant Life	5	Plant Life	5	Plant Life	5
5. Animal Life	5	Animal Life	5	Animal Life	5
	25		25		25

NOTE.—Plant Life to be taught by the Farm Crops, and Animal Life by the Animal Husbandry departments as nature study.

(Enter Third Grade.)

Third Grade

First Term	Hrs.	Second Term	Hrs.	Third Term	Hrs.
1. English	5	English	5	English	5
2. Mathematics	5	Mathematics	5	Mathematics	5
3. Drawing	5	Plant Culture	5	Classes of Live Stock	5
4. Physical Geog.	5	Physical Geog.	5	Geology	5
5. Introduction to Agriculture	5	Introduction to Agriculture	5	Farm Machinery	5
	25		25		25

(Enter Second Grade of whichever Section may be chosen by the Student.)

FARM CROPS SECTION

Second Grade

First Term	Hrs.	Second Term	Hrs.	Third Term	Hrs.
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Biology	5	Farm Chemistry	5	Soils and Soil Fertility	5
4. Farm Crops (Cereals)	5	Farm Crops (Forage)	5	Farm Crops (Practice)	5
5. Farm Machinery Repairs	5	Vegetable Gardening	5	Concrete and Shop	5
	25		25		25

First Grade

First Term	Hrs.	Second Term	Hrs.	Third Term	Hrs.
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Breeds and Judging	5	Feeds and Feeding	5	Bee Culture	5
4. Cotton and Tobacco	5	Crop Improvement	5	Farm Management	5
5. Farm Economics	5	Pruning and Spraying	5	Tractors	5
	25		25		25

ANIMAL HUSBANDRY SECTION

Second Grade

First Term	Hrs.	Second Term	Hrs.	Third Term	Hrs.
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Breeds and Judging	5	Feeds and Feeding	5	Swine	5
4. Biology	5	Farm Chemistry	5	Hay and Forage	5
5. Farm Mach. Repairs	5	Vegetable Gardening	5	Concrete and Shop	5
	25		25		25

First Grade

First Term	Hrs.	Second Term	Hrs.	Third Term	Hrs.
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Dairying	5	Animal Diseases	5	Poultry	5
4. Cereals	5	Legumes	5	Farm Management	5
5. Farm Economics	5	Pruning and Spraying	5	Farm Buildings	5
	25		25		25

HORTICULTURAL SECTION

Second Grade

First Term	*Hrs.*	Second Term	*Hrs.*	Third Term	*Hrs.*
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Cereals	5	Vegetable Gardening	5	Vegetable Gardening	5
4. Biology	5	Farm Chemistry	5	Soils and Soil Fertility	5
5. Farm Mach. Repairs	5	Feeds and Feeding	5	Concrete and Shop	5
	25		25		25

First Grade

First Term	*Hrs.*	Second Term	*Hrs.*	Third Term	*Hrs.*
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Fruit Growing	5	Pruning and Spraying	5	Bee Culture	5
4. Plant Diseases	5	Insects	5	Farm Management	5
5. Farm Economics	5	Poultry	5	Tractors	5
	25		25		25

POULTRY SECTION

Second Grade

First Term	*Hrs.*	Second Term	*Hrs.*	Third Term	*Hrs.*
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. General Poultry	5	General Poultry	5	Breeds and Judging	5
4. Biology	5	Farm Chemistry	5	Soils and Soil Fertility	5
5. Farm Mach. Repairs	5	Vegetable Gardening	5	Concrete and Shop	5

First Grade

First Term	*Hrs.*	Second Term	*Hrs.*	Third Term	*Hrs.*
1. English	5	English	5	English	5
2. Farm Mathematics	5	Farm Mathematics	5	Farm Mathematics	5
3. Poultry Marketing	5	Poultry Diseases	5	Incubating and Brooding	5
4. Cereals	5	Feeds and Feeding	5	Farm Management	5
5. Farm Economics	5	Pruning and Spraying	5	Farm Buildings	5
	25		25		25

Special Grade

Students having higher grade of preparation, will be allowed freedom to elect such four-year courses as they may choose, and their official agricultural adviser may approve for them.

II. ENGINEERING COURSES

a. Four-year Course in Chemistry.
b. Four-year Course in Civil Engineering.
c. Four-year Course in Electrical Engineering.
d. Four-year Course in Mechanical Engineering.
e. Four-year Course in Textile Engineering.

The Engineering Courses give a thorough grounding in such fundamental sciences as Mathematics, Physics, and Chemistry, and thorough drill in the application of the principles thus learned to engineering problems. The student is given practice in the use of engineering instruments and methods, and is encouraged to rely upon his own resources in the solution of problems. Though the courses are primarily technical and practical, they include subjects of general culture throughout all four years.

The Freshman years of all the Engineering Courses are similar and include much practical instruction. The student in the different shops learns the use of tools and the handling and manipulation of materials of construction. Instruction is given in working wood and iron. In the Sophomore year this work is continued in the pattern-making shop and in the foundry also. In the Physical laboratory much attention is paid to the practical value of such instruction. Here the student is taught the science of measurement and is trained to observe and work accurately. During these two years he is also given a thorough training in Freehand Sketching and Mechanical Drafting, skill in which is essential in all lines of engineering work.

Differentiation of the different engineering courses begins in the Sophomore year. The practical work here, in the shop, in the field, or in the laboratory, directs the student's attention to the specific phases of that branch of the profession he is to follow. In the Junior year the study of engineering methods is begun and is continued more fully in the Senior year. In all courses much time is spent during the Junior and Senior years in the laboratory, shop, mill, or field.

Upon the satisfactory completion of these courses the degree of Bachelor of Engineering is conferred. The advanced degrees of Civil Engineer, Electrical Engineer, Mechanical Engineer, and Textile Engineer may also be conferred upon graduates of three years standing who have had responsible charge of important work, upon complying with the College requirements.

More detailed descriptions of the different courses follow.

CHEMICAL COURSES

a. Four-year Course in Agricultural Chemistry.
b. Four-year Course in Chemistry.
c. Four-year Course in Textile Chemistry and Dyeing.

The great war has been designated by some as a chemical war because of the important part which chemistry has played in it. Those who consider this statement extravagant cannot deny that the war has served to impress upon the world the importance of chemistry as a factor in the affairs of men. Explosives, noxious gases, and gas masks could not have been possible without the skill of the chemist. The success with which the American chemist has met the emergency along these lines has served to stimulate and encourage our Nation. Chemical skill will be called into use to a greater extent than ever before in connection with our agricultural and industrial development. Plants for making nitrates and other nitrogen compounds from the air are springing up from place to place. There is a rapid growth in the manufacture of dyestuffs, medicines, and the heavy chemicals. Glass and porcelain for the laboratory and for use elsewhere are made here in rapidly increasing quantities. Steel, gas, cement, and industrial alcohol are demanded by our industries, and their production requires chemical supervision. We shall not be satisfied any longer with the production of crude materials only, but must develop a higher skill in chemical manufacturing.

The State College of Agriculture and Engineering has planned to meet the needs of such young men by offering three separate courses in Chemistry, each of which leads to a degree. So far as the work of the lower classes is concerned, the chemical instruction is practically the same. But with the higher classes, there is more and more differentiation in instruction in Chemistry and other subjects.

All chemical students have Inorganic, Organic, Analytical, Physical, Historical, and Industrial Chemistry. They also have the same studies in English and Foreign Languages.

The student in Textile Chemistry and Dyeing learns how to make dyestuffs, and to apply them to the various fabrics in the dyehouse, as well as the chemistry involved in these processes. He is also given instruction in some elementary textile subjects. This course is described more fully by the Textile Department.

The student in Agricultural Chemistry receives the same instruction as the other Agricultural students throughout the Freshman and Sophomore years. This course is outlined in detail, along with the other Agricultural courses.

In the Chemical Course the student receives the same instruction as Engineering students during the Freshman year. There is an increasing amount of time given to Chemistry with the higher classes.

All three of the Chemical courses afford opportunity for some range in the choice of studies.

Provision is made also for graduate students in courses of study leading to the degree of Master of Science. These courses are arranged along the special lines in which the student is most interested. Our graduate and advanced undergraduate courses will specially appeal to college graduates who have become interested in Chemistry, and wish to pursue the subject further. Some of the subjects offered this year for graduate study are inorganic chemistry, physical chemistry, quantitative analysis, microchemical analysis, organic chemistry, physiological chemistry, and nitrification.

There are several chemical plants in the city which are open to our students through the courtesy of the owners. The chemical laboratories of the North Carolina Department of Agriculture and of the several divisions of the Agricultural Experiment Station afford students an opportunity to keep in touch with the interesting work of these institutions.

The State Museum contains a splendid collection of minerals, ores, and building stones, and affords students an opportunity for the study of the natural resources of the State.

The Chemical Department occupies the whole of the second floor of Winston Hall. There are three classrooms, two for about thirty students each, and one for ninety students. The classrooms are well lighted, and are provided with convenient lecture tables and settees with arm rests for taking notes.

The laboratory for inorganic chemistry can accommodate three hundred and thirty-six students, the laboratory for qualitative analysis about ninety-six, and for organic chemistry and quantitative analysis about twenty each. A small laboratory has been set aside for special work. The laboratories are fitted up with conveniently arranged desks and hoods, each of which has the necessary water and gas connections. The balance room is located near the quantitative laboratory. Special equipment has been provided for microchemical analysis and physical chemistry.

The department has also a dark room for photographic work, fireproof rooms for combustion, ample stock rooms, and a preparation room.

The Chemical Library, containing an excellent collection of reference books and complete sets of some of the leading chemical journals, occupies a room convenient to the laboratories for the upper classmen.

The members of the instructing staff have offices adjacent to the laboratories.

The salary usually paid to chemical graduates immediately upon the completion of their courses is $1,500 or more. Many with experience are receiving $3,000, some $5,000, and a few over $7,000 a year as compensation. The Department has been unable to meet the demand made upon it for men.

Our chemical graduates have proven their ability and skill by the high salaries they are receiving in the industries, colleges, universities, and experiment stations of our country, by the leading part they are taking in the technical societies, and by their contributions to chemical literature.

Four-year Course in Chemistry, leading to the degree of Bachelor of Science.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Chemistry, 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Algebra, Math. 101 (b)	5	5	0	0
Algebra, Math. 102	0	0	1	1
Geometry, Math. 104	0	0	4	4
Composition and Rhetoric, English, 101-102	3	3	3	3
Drawing, M. E. 103-104	1	3	2	4
Engineering Lectures, M.E. 102	0	0	1	1
Physics, 101-102	2	2	2	2
Physics, Laboratory, 103-104	1	2	1	2
Woodshop, M. E. 105-106	1	3	1	3
Military Art, 101-102	3	4	3	4
Citizenship, Econ. 101	2	3	0	0
Totals	22	31	22	30

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Chemistry, Analytical, 201-202	3	6	3	6
English, 201-202	3	3	3	3
Physics, 201-202	4	4	4	4
Physics, Laboratory, 203-204	1	3	1	3
Trigonometry, Math. 201	5	5	0	0
Analytical Geometry, Math. 202	0	0	5	5
German, Modern Language 201-202	2	2	2	2
Military Art, 201-202	3	4	3	4
Totals	21	27	21	27

Junior Year

Chemistry, Organic, 301-302	3	3	3	3
Chemistry, Organic, Laboratory, 303-304	1	3	1	3
Chemistry, Quantitative Analysis, 305-306	3	6	3	6
English, 301-302	3	3	3	3
German, Modern Language 303-304	3	3	3	3
Electrochemistry, 307-308	3	3	3	3
Electrochemistry, Laboratory, 309-310	1	3	1	3
	17	24	17	24
Minimum Electives	4	4	4	4
Totals	21	28	21	28
Electives				
Military Art, 301-302	4	5	4	5
or				
Economics, 301-302	2	2	2	2
And one of the following:				
Sociology, Econ. 303-304	2	2	2	2
French, Mod. Lang. 301-302	2	2	2	2
Dyeing, Tex. 309-310-311-312	2	4	2	4

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Chemistry, Historical, 401	2	2	0	0
Chemistry, Industrial, 402	0	0	2	2
Chemistry, Inorganic, 404	0	0	2	2
Chemistry, Microanalysis, 403	2	4	0	0
Chemistry, Physical, 405-406	3	3	3	3
Chemistry, Physical, Laboratory, 407-408	1	3	1	3
Chemistry, Quantitative Analysis, 409-410	6	12	6	12
	14	24	14	22
Minimum Electives	7	7	7	7
Totals	21	31	21	29
Electives				
Military Art, 401-402	4	5	4	5
Chemistry, Organic, 411-412	3	5	3	5
Chemistry, Physiological, 312-314	0	0	3	4
Shop Organization, Economics 405-406	2	2	2	2
English, 401-402	3	3	3	3
German, Modern Language, 403-404	3	3	3	3
Other Agricultural or Engineering subjects, if approved by Professor of Chemistry.				

FOUR-YEAR COURSE IN CIVIL ENGINEERING

The aim of the course in Civil Engineering is to give such training as will enable our young men to take an active part in the work of advancing our State along material lines—developing its water power, building railroads and public highways, constructing water supply and sewerage systems for our towns, etc.

The student is given a large amount of practical work in the field and drafting room, and acquires a fair degree of efficiency in the use of the various surveying instruments, and in drafting. At the same time it is recognized that a successful engineer requires a well trained mind—one that reasons logically, accurately, and quickly. Therefore a thorough course is given in all those branches of applied mathematics which are involved in the solution of engineering problems.

The aim has been to make this preëminently a technical course; but subjects of general culture are included in order to give the student a broader mental training and better preparation for social and business life.

The department is equipped with surveying instruments, plane tables, sextants, three-arm protectors, current meters, blue-printing frame, calculating machines, cement testing apparatus, and other laboratory instruments.

Four-year Course in Civil Engineering, leading to the degree of Bachelor of Engineering.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Algebra, Mathematics 101	5	5	0	0
Geometry, Mathematics 104	0	0	4	4
Advanced Algebra, Mathematics 102	0	0	1	1
Composition and Rhetoric, English 101-102	3	3	3	3
Elementary Physics, 101-102	2	2	2	2
Physical Laboratory, 103-104	1	2	1	2
Civil Engineering Lectures, 102	0	0	1	1
Wood Work, Mechanical Engineering 105-106	1	3	1	3
Citizenship, Econ. 101	2	3	0	0
Mechanical Drawing, Mechanical Engineering 103-104	1	3	2	4
Chemistry, 101-102	3	3	3	3
Chemical Laboratory, 103-104	1	3	1	3
Military Art, 101-102	3	4	3	4
Totals	22	31	22	30

Sophomore Year

History, Architecture 201	2	2	0	0
Elements of Design, Architecture 203-204	1	3	1	3
Descriptive Geometry, Civil Eng. 205	2	6	0	0
Materials of Construction, Civil Eng. 202	0	0	2	2
Theoretical Surveying, Civil Eng. 206	0	0	2	2
Field Surveying, Civil Eng. 208	0	0	1	3
English, 201-202	3	3	3	3
Trigonometry, Mathematics 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
Physics, 201-202	4	4	4	4
Physical Laboratory, 203-204	1	3	1	3
Military Art, 201-202	3	4	3	4
Totals	21	30	22	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Theoretical Surveying, Civil Eng., 301	2	2	0	0
Railroad Engineering, Civil Eng., 302	0	0	2	2
Surveying (Field Work), Civil Eng., 303	1	3	0	0
Topographical Surveying (Field), Civil Eng. 304	0	0	1	3
Topographical Drawing, Civil Eng. 306	0	0	1	3
Highway Engineering, Civil Eng. 307-308	2	2	2	2
Graphic Statics, Civil Eng. 309	1	3	0	0
Mechanics, Civil Eng. 311-312	3	3	3	3
Spanish, Modern Language, 307-308	2	2	2	2
Calculus, Mathematics 301-302	4	4	4	4
English, 301-302	3	3	3	3
	17	22	18	22
Minimum electives	4	4	4	4
Totals	21	26	22	26
Elective:				
Military Art, 301-302	4	5	4	5
or				
Economics, 301-302	2	2	2	2
and one of the following:				
Sociology, 303-304	2	2	2	2
French, Mod Lang. 301-302	2	2	2	2

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Roofs and Bridges, Civil Eng. 401	3	3	0	0
Bridge Design, Civil Eng. 402 or Bridge Design, Civil Eng. 402H	0	0	3	6
Municipal Engineering, Civil Eng. 404	0	0	2	2
Railroad Surveying, Civil Eng. 405 or Highway Surveying, Civil Eng. 405H	1	3	0	0
Mechanics of Materials, Civil Eng. 407	3	3	0	0
Reinforced Concrete, Civil Eng. 408	0	0	3	3
Hydraulics, Civil Eng. 409	3	3	0	0
Railroad Engineering, Civil Eng. 411 or Highway Engineering, Civil Eng. 411H	2	2	0	0
Railroad Economics, Civil Eng. 412 or Highway Economics, Civil Eng. 412H	0	0	2	2
Water Supply, Civil Eng. 414	0	0	2	2
Mechanics, Civil Eng. 413	3	3	0	0
Astronomy, Civil Eng. 416	0	0	2	2
Laboratory, Civil Eng. 406 or Laboratory, Highway Engineering 406H	0	0	1	3
Heat Engines, Mechanical Eng. 419-420	2	2	2	2
	17	19	17	22
Minimum electives	4	4	4	4
Totals	21	23	21	26
Electives:				
Military Art 401-402	4	5	4	5
or two subjects from the following list:				
Classics and Journals, Eng. 401-402	3	3	3	3
Spanish, Mod. Lang. 405-406	3	3	3	3
Shop Organization, Econ. 405-406	2	2	2	2
Personal Administration, Econ. 407-408	2	2	2	2

ARCHITECTURAL ENGINEERING

The General Assembly of North Carolina passed in 1915 an act entitled "An act to regulate the practice of architecture, and creating a board of examination and registration of same." The purpose of this law is to protect the builder as well as the bona fide architect from the practice of inexperienced or poorly trained

men. It is necessary for any one who wishes to qualify for this requirement to have had sufficient training and experience to enable him to pass creditably an examination given by the State Board.

To meet the demand for better trained men in the profession of Architecture, a new course in Architectural Engineering has been added to the curriculum. This course is the same for the Freshman and Sophomore years as that of Civil Engineering. The Junior and Senior years take up studies more purely architectural than that of the first two years. The whole course is a combination of the practical and theoretical technical training with that of the esthetic and cultural phases so necessary in the practice of architecture. The degree of Bachelor of Architecture will be granted to those who satisfactorily complete this course.

ARCHITECTURAL ENGINEERING

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
History of Architecture, Arch. Eng. 301	2	2	0	0
Composition, Arch. Eng. 302	0	0	1	1
Design, Arch. Eng. 303-304	2	6	2	6
Pen and Pencil Drawing, Arch. Eng. 305	1	3	0	0
Water Color, Arch. Eng. 306	0	0	1	3
Working Drawings, Arch. Eng. 308	0	0	1	3
Photography, Arch. Eng. 310	0	0	1	3
Graphic Statics, Civil Eng. 309	1	3	0	0
Mechanics, Civil Eng. 311-312	3	3	3	3
Calculus, Mathematics 301-302	4	4	4	4
French, Mod. Lang. 301-302	2	2	2	2
English, 301-302	3	3	3	3
	18	25	18	28
Minimum electives	4	4	4	4
Totals	22	29	22	32
Electives:				
Military Art, 301-302	4	5	4	5
or				
Economics, 301-302	2	2	2	2
and one of the following:				
Sociology, Econ. 303-304	2	2	2	2
Spanish, Mod. Lang. 307-308	2	2	2	2

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Tall Buildings, Arch. Eng. 401	3	3	0	0
Design, Arch. Eng. 403-404	2	6	4	12
Clay Modelling, Arch. Eng. 405	1	3	0	0
Professional Practice, Arch. Eng. 406	0	0	1	1
Advanced Water Color, Arch. Eng. 407	1	3	0	0
Fire Protection, Arch. Eng. 408	0	0	1	1
Specifications, Arch. Eng. 410	0	0	1	1
Roofs and Bridges, Civil Eng. 401	3	3	0	0
Municipal Engineering, Civil Eng. 404	0	0	2	2
Laboratory, Civil Eng. 406	0	0	1	3
Mechanics of Materials, Civil Eng. 407	3	3	0	0
Reinforced Concrete, Civil Eng. 408	0	0	2	2
Electric Lighting, Elec. Eng. 411	2	2	0	0
Heating, Ventilating, and Refrigeration, Mech. Eng. 408	0	0	2	2
French, Mod. Lang. 305-306	3	3	3	3
	18	26	17	27
Minimum electives	4	4	4	4
Totals	22	30	21	31
Electives:				
Military Art, 401-402	4	5	4	5
or two subjects from the following list:				
English, 401-402	3	3	3	3
Spanish, Mod. Lang. 405-406	3	3	3	3
Shop Organization, Econ. 405-406	2	2	2	2
Personal Administration, Econ. 407-408	2	2	2	2

FOUR-YEAR COURSE IN ELECTRICAL ENGINEERING

The electrical industry becomes yearly more essential in our industrial world, as there is hardly an industry in which it does not take an ever-growing part or render some important service. The ease of control, safety, efficiency and flexibility of this form of power make it equally suitable for transmitting the human voice over the telephone, for hauling the heaviest freight train over a mountain grade, for driving the largest rolling mill, for running a sewing machine or carrying a message to a ship at sea. Its field of application is as wide as our industry and seems to offer limitless opportunities for development.

With this wide extension of electrical methods technical and scientific problems become more complex, and this in turn renders a thorough knowledge of electrical theory more essential. Many of the new problems necessitate the use of the labor saving methods of higher mathematics for successful solutions. Moreover, a sound grounding in theoretical and applied mechanics and familiarity with the characteristic behavior of the various electrical machines becomes imperative. It is the object of the four-year course in Electrical Engineering to give as much of the thorough training in engineering methods as can be done in a four year course at college.

In the Freshman year the fundamental sciences of Mathematics, Chemistry, and Physics are studied, drill in English and training in the drafting room and shop are given, and a course of lectures on Electrical Engineering subjects gives the student a general idea of the field covered by his profession.

In the Sophomore year Mathematics, Physics, and English are continued, as well as training in the drafting room and shop. Practice is given in the installation, care, and repair of electrical appliances. This year includes a course in French.

In the Junior year a thorough study of Electrical Theory is begun. This is accompanied by well planned, coördinated work in the Electrical Engineering Laboratory. The study of higher Mathematics and of English is continued. The study of Theoretical Mechanics is begun, and a course in Heat Engines, accompanied by laboratory work, makes the student familiar with these forms of prime movers.

In the Senior year the theoretical study of electricity is continued, accompanied by Problems in Design and work in the Electrical Engineering Laboratory; the latter includes training in the more elaborate methods of Electric and Magnetic Measurements,

as well as in the operation and testing of machines. The transmission and distribution of electrical power is studied, with its application in Electric Lighting, Electric Traction, Shop and Mill Driving, Industrial Electric Chemistry, and Methods of Electrical Communication, including wire and radio telegraphy and telephony. During this year the study of Mechanics and the Strength of Materials is continued, and a course in Hydraulics is given. In all the above courses emphasis is laid on the fundamental principles and methods of solving engineering problems in order that a broad, deep foundation for future development may be laid.

During the Junior and Senior years those students who do not take the military training elect subjects in the other departments, such as Economics, Industrial Engineering, Machine Shop, Modern Language, Physical Chemistry, etc.

ELECTRICAL ENGINEERING COURSE

The Four-Year Course in Electrical Engineering, leading to the degree of Bachelor of Engineering.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Algebra, Mathematics 101 (b)	5	5	0	0
Geometry, Mathematics 104	0	0	4	4
Advanced Algebra, Mathematics 102	0	0	1	1
Composition and Rhetoric, English 101-102	3	3	3	3
Elementary Physics, 101-102	2	2	2	2
Physical Laboratory, 103-104	1	2	1	2
Citizenship, Economics 101	2	3	0	0
Electrical Engineering Lectures, 102	0	0	1	1
Wood Work, Mech. Eng. 105-106	1	3	1	3
Mechanical Drawing, Mech. Eng. 103-104	1	3	2	4
Chemistry, 101-102	3	3	3	3
Chemical Laboratory, 103-104	1	3	1	3
Military Art, 101-102	3	4	3	4
Totals	22	31	22	30

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Trigonometry, Mathematics 201	5	5	0	0
Analytical Geometry, Mathematics 202	0	0	5	5
English, 201-202	3	3	3	3
Physics, 201-202	4	4	4	4
Physical Laboratory, 203-204	1	3	1	3
Descriptive Geometry, Mech. Eng. 201-202	1	3	2	4
French, Mod. Lang. 203-204	2	2	2	2
Electrical Practice, 201	2	4	0	0
Forge, Mech. Eng. 206	0	0	1	3
Military Art, 201-202	3	4	3	4
Totals	21	28	21	28

Junior Year

Electrical Engineering, 301-302	3	3	3	3
Electrical Engineering Laboratory, 305-306	2	4	2	4
Mechanics, Mech. Eng. 309-310	2	2	2	2
Calculus, Mathematics 301-302	4	4	4	4
English, 301-302	3	3	3	3
Heat Engines, Mech. Eng. 301-302	3	3	3	3
Mechanical Engineering Laboratory, 307-308	1	2	1	2
	18	21	18	21
Minimum electives	4	4	4	4
Totals	22	25	22	25
Electives:				
Military Art, 301-302	4	5	4	5
or				
Economics 301-302	2	2	2	2
and one of the following:				
Sociology, Econ. 303-304	2	2	2	2
French, Mod. Lang. 305-306	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Alternating Currents, E. E. 401-402	3	3	3	3
Electrical Transmission and Distribution for Lighting and Power, E. E. 405-406	3	3	2	2
Industrial Applications of Electrochemistry, E. E. 403	3	3	0	0
Electrical Communication, E. E. 404	0	0	3	4
Electrical Design, E. E. 409-410	1	2	1	2
Electrical Engineering Laboratory, E. E. 407-408	3	6	3	6
Mechanics, M. E. 405-406	3	3	2	2
Hydraulics, C. E. 410	0	0	2	2
Personal Administration and Industrial Problems, Econ. 407-408	2	2	2	2
or				
French, Mod. Lang. 203-204 (for 1921-'22 only)	2	2	2	2
	18	22	18	23
Minimum electives	4	4	4	4
Totals	22	26	22	27
Electives:				
Military Art 401-402	4	5	4	5
or two subjects from the following list:				
Classics and Journals, English 401-402	3	3	3	3
French, Mod. Lang. 401-402	3	3	3	3
Shop Organization, Economics 405-406	2	2	2	2
Physical Chemistry 405-406	3	3	3	3
Machine Shop, M. E. 305-306	1 or 2	2 or 4	1 or 2	2 or 4
Mechanism, M. E. 303-304	2	3	2	3

FOUR-YEAR COURSE IN MECHANICAL ENGINEERING

The course in Mechanical Engineering offers instruction in the scientific principles forming the foundation of all engineering, but with particular regard to the generation and transmission of power, and to the principles of the design, construction, and operation of machinery. To this end the course of instruction is as broad as is possible to give in a technical school.

The major studies in the Freshman and Sophomore years are Chemistry, Drawing, English, Mathematics, and Physics. These supply the necessary preparation for the more advanced scientific and professional studies of the Junior and Senior years, which are Applied Mechanics, Materials of Construction, Machine Design, Steam Engineering, Thermodynamics, Hydraulics, Electrical Engineering, and Shop Management. Throughout the course the student devotes much time to shop practice in the large and well equipped shops of the College. There he becomes familiar with the methods, tools, and machinery employed in the best practice in the working of wood and of metals. He learns the possibilities of machine construction in connection with pattern, foundry, forge, and machine work, and lays a solid foundation for the future mechanical engineer.

In the various laboratories—Chemical, Physical, Electrical, and Mechanical—the student carries out experiments which both reveal and apply the natural laws of matter and energy, and he thus in the best manner supplements the theoretical instruction received in the classroom. It is in these laboratories that he finds educational opportunities which only the well equipped technical college can offer, and for which no equivalent exists in the most extended experience in the workshop or factory.

In addition to the excellent facilities which the College in itself offers for the theoretical and practical study of mechanical engineering, its surroundings are favorable in offering a diversity of examples of practical application of mechanical science. Within easy reach of the College are machine shops, foundries, pumping stations, and power plants which are open to the inspection of students. Thus the educational facilities of these industrial plants may be utilized for the benefit of the student.

Graduates of the course in Mechanical Engineering are fitted in the best way to derive the utmost value from the experiences of the professional work of after years. While it is not expected that the graduate will at once be a finished designer or contractor, it is true that in the course of a few years he will, as a rule, far outstrip his competitor who lacks the thorough and systematic training given by the technical course.

MECHANICAL ENGINEERING COURSE

The Four-year Course in Mechanical Engineering, leading to the degree of Bachelor of Engineering.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Elementary Physics 101-102	2	2	2	2
Physical Laboratory 103-104	1	2	1	2
Mechanical Drawing, M. E. 103-104	1	3	2	4
Wood Work, M. E. 105-106	1	3	1	3
Mech. Eng. Lectures, M. E. 102	0	0	1	1
Citizenship, Econ. 101	2	3	0	0
Algebra, Mathematics 101 (b)	5	5	0	0
Advanced Algebra, Mathematics 102	0	0	1	1
Geometry, Mathematics 104	0	0	4	4
Composition and Rhetoric, English 101-102	3	3	3	3
Chemistry 101-102	3	3	3	3
Chemical, Laboratory, 103-104	1	3	1	3
Military Art 101-102	3	4	3	4
Totals	22	31	22	30

Sophomore Year

Physics 201-202	4	4	4	4
Physical Laboratory 203-204	1	3	1	3
Descriptive Geometry, M. E. 201-202	1	3	2	4
Trigonometry, Mathematics 201	5	5	0	0
Analytical Geometry, Mathematics 202	0	0	5	5
Foundry, M. E. 203	1	3	0	0
Pattern-making, M. E. 205	1	3	0	0
Forge Shop, M. E. 206	0	0	1	3
English 201-202	3	3	3	3
French, Mod. Lang. 203-204	2	2	2	2
Military Art 201-202	3	4	3	4
Total	21	30	21	28

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Heat Engines, M. E. 301-302	3	3	3	3
Mechanics, M. E. 309-310	2	2	2	2
Calculus, Mathematics 301-302	4	4	4	4
Mechanism, M. E. 303-304	2	4	2	4
Machine Shop, M. E. 305-306	1	3	1	3
M. E. Laboratory, M. E. 307-308	1	3	1	3
English 301-302	3	3	3	3
Electrical Engineering 303-304	2	3	2	3
	18	25	18	25
Minimum electives	4	4	4	4
Totals	22	29	22	29
Electives:				
Military Art 301-302	4	5	4	5
or				
Economics 301-302	2	2	2	2
and one of the following:				
Sociology, Econ. 303-304	2	2	2	2
French, Mod. Lang. 305-306	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Power Plant, M. E. 401-402	3	3	3	3
Gas Engines, M. E. 403	3	3	0	0
Mechanics, M. E. 406	0	0	2	2
Mechanics of Materials, M. E. 405	3	3	0	0
Heating, Ventilation, and Refrigeration, M. E. 408	0	0	2	2
Machine Design, M. E. 409	3	6	0	0
Design, M. E. 410 or 412, 404 or 414	0	0	3	6
Laboratory, M. E. 415-416	1	1	1	1
	1	3	1	3
Machine Shop Work, M. E. 417-418	2	4	2	4
Hydraulics, C. E. 410	0	0	2	2
Electrical Engineering 303-304 (for 1921-'22 only)	2	2	2	2
	18	25	18	25
Minimum electives	4	4	4	4
Totals	22	29	22	29
Electives:				
Military Art 401-402	4	5	4	5
or two subjects from the following list:				
French, Mod. Lang. 401-402	3	3	3	3
Shop Organization and Management, Econ. 405-406	2	2	2	2
Personal Administration and Industrial Problems, Econ. 407-408	2	2	2	2
English 401-402	3	3	3	3

TWO-YEAR COURSE IN MECHANIC ARTS

In order to meet the necessities of young men who wish to prepare themselves for the industrial arts rather than for industrial science and art, the following two-year course in Mechanic Arts is offered.

This course does not lead to graduation, and it is not in any sense intended as a preparatory course for the regular four-year courses. It is designed simply to help young men better to fit themselves, by a year or two of practical work under competent and interested supervision, for their chosen sphere of industrial activity.

First Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Mechanical Drawing, 11-12	2	4	2	4
Wood Work, 21-22	1	3	1	3
Forge Work, 31	1	3	1	3
Mechanical Technology, 41	2	2	2	2
Physics, 11-12	3	3	3	3
Algebra, 11	5	5	0	0
Plane Geometry, 12	0	0	5	5
English, 11-12	3	3	3	3
Military Art, 101-102	3	4	3	4
Totals	20	27	20	27

Second Year

Machine Drawing, Mechanical Eng. 51-52	3	6	3	6
Machine Shop Work, Mechanical Eng. 61-62	3	6	3	6
Power Machinery, Mechanical Eng. 71-72	3	3	3	3
Elementary Mechanics, Mechanical Eng. 82	0	0	2	2
Gas Engine Laboratory, Mechanical Eng. 92	0	0	1	3
Pattern Work, Mechanical Eng. 81	1	3	0	0
Foundry, Mechanical Eng. 91	1	3	0	0
Algebra, Mathematics 101-102	5	5	1	1
Geometry, Mathematics 104	0	0	4	4
English 101-102	3	3	3	3
Military Art 201-202	3	4	3	4
Totals	22	33	23	32

III. TEXTILE COURSES

a. **Four-year Course in Textile Manufacturing.**
b. **Four-year Course in Textile Engineering.**
c. **Four-year Course in Textile Chemistry and Dyeing.**
d. **Two-year Course in Textile Manufacturing.**

THE TEXTILE DEPARTMENT

This department, which is a fully equipped Textile school, is known as the North Carolina Textile School, and contains all the necessary machinery for instruction in manufacturing cotton yarns and fabrics from the bale to the finished product. The department also contains the necessary equipment in both the experimental and the practical laboratories for chemical analysis as applied to bleaching and dyeing and for bleaching and dyeing larger amounts of raw cotton yarn in skein and cloth.

Four-year Course in Textile Manufacturing

This course offers complete facilities for full instruction in all branches of cotton manufacturing, including textile chemistry, bleaching, and dyeing. Practical training in Textile work begins in the Freshman year and forms a part of the work in each of the following years. The theoretical work is directly related to the practical work going on, and this combination offers the best means of studying cotton manufacturing in all its operations. The actual hours devoted to textile work are increased each year during the four years so that in the Senior year the student devotes most of his time to textile work. Each student produces for himself cotton yarns of different numbers, dyes and bleaches cotton and yarn, and makes shirtwaistings, dress goods, and other fabrics from his own designs and colorings.

The Four-year Course in Textile Manufacturing, leading to the degree of Bachelor of Engineering.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Manufacturing, 101-102	2	3	2	3
Weaving, Textile Manufacturing 103-104	2	3	2	3
Mechanical Drawing, Mechanical Eng. 103-104	1	3	2	4
Engineering Lectures, Textile Eng. 106	0	0	1	1
Algebra, Mathematics 101 (b)	5	5	0	0
Geometry, Mathematics 104	0	0	4	4
Advanced Algebra, Mathematics 102	0	0	1	1
Chemistry 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Composition and Rhetoric, English 101-102	3	3	3	3
Citizenship, Econ. 101	2	3	0	0
Military Art 101-102	3	4	3	4
Totals	22	30	22	29

Sophomore Year

Carding and Spinning, Textile Manufacturing, 201-202	2	3	3	4
Weaving, Textile Manufacturing 203-204	2	3	2	3
Designing, Textile Manufacturing 205-206	2	4	2	2
Cloth Analysis, Textile Manufacturing 208	0	0	1	2
Physics 205-206	3	4	3	4
Analytical Chemistry and Dyeing 209-210	2	4	2	4
Drawing, Mechanical Eng. 208	0	0	1	3
Trigonometry, Mathematics 201	5	5	0	0
English 201-202	3	3	3	3
Military Art 201-202	3	4	3	4
Totals	22	30	20	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.

(2) First term courses are given the odd numbers; Second term, the even numbers.

(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Manufacturing 301-302	3	5	3	5
Weaving, Textile Manufacturing 303-304	3	5	3	5
Designing, Textile Manufacturing 305-306	3	4	2	2
Cloth Analysis, Textile Manufacturing 308	0	0	1	2
Dyeing, Textile Manufacturing 309-310	1	1	1	1
Dyeing, Laboratory, Textile Manufacturing 311-312	1	3	1	3
Spanish, Mod. Lang. 307-308	2	2	2	2
English 301-302	3	3	3	3
Motors, Electrical Eng. 309-310	2	2	2	2
	18	25	18	25
Minimum electives	4	4	4	4
Totals	22	29	22	29
Electives:				
Military Art 301-302	4	5	4	5
or				
Economics 301-302	2	2	2	2
and one of the following:				
Sociology, Econ. 303-304	2	2	2	2
French, Mod. Lang. 301-302	2	2	2	2
Teacher Training, Textile Manufacturing 313-314	2	2	2	2
Or subjects in other departments which can be scheduled.				

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Manufacturing 401-402	4	6	4	6
Weaving, Textile Manufacturing 403-404	4	6	4	6
Designing, Textile Manufacturing 405-406	3	3	3	3
Cloth Analysis, Textile Manufacturing, 407-408	1	2	1	2
Dyeing, Textile Manufacturing 409-410	2	2	2	2
Dyeing, Laboratory, Textile Manufacturing 411-412	2	4	2	4
Heat Engines, Mechanical Engineering 419-420	2	2	2	2
	18	25	18	25
Minimum electives	4	4	4	4
Totals	22	29	22	29
Electives:				
Military Art 401-402	4	5	4	5
or two subjects from the following list:				
Spanish, Mod. Lang. 405-406	3	3	3	3
Shop Organization and Management, Econ. 405-406	2	2	2	2
Personal Administration and Industrial Problems, Econ. 407-408	2	2	2	2
English 401-402	3	3	3	3
Teacher Training, Textile Manufacturing 413-414	2	2	2	2

FOUR-YEAR COURSE IN TEXTILE ENGINEERING

This course offers a complete training for young men who desire to take up the profession of Textile Engineering. The course differs from that of Textile Manufacturing in that more engineering subjects are added with a certain amount of Textile work so as to make the course thoroughly practical.

There is a growing demand for young men who wish to follow the textile industry along engineering lines.

The Four-year Course in Textile Engineering, leading to the degree of Bachelor of Engineering.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Eng. 101	1	3	0	0
Weaving, Textile Eng. 104	0	0	2	3
Chemistry 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Mechanical Drawing, Mechanical Eng. 103-104	1	3	2	4
Algebra, Mathematics 101	5	5	0	0
Geometry, Mathematics 104	0	0	4	4
Advanced Algebra, Mathematics 102	0	0	1	1
Physics 101-102	2	2	2	2
Physical Laboratory 103-104	1	2	1	2
Composition and Rhetoric, English 101-102	3	3	3	3
Citizenship, Econ. 101	2	3	0	0
Military Art 101-102	3	4	3	4
Totals	22	31	22	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.

(2) First term courses are given the odd numbers; Second term, the even numbers.

(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Eng. 201-202	2	3	2	3
Weaving, Textile Eng. 203-204	2	3	2	3
Trigonometry, Mathematics 201	5	5	0	0
Analytical Geometry, Mathematics 202	0	0	5	5
Physics 201-202	4	4	4	4
Physical Laboratory 203-204	1	3	1	3
Elements of Design, Civil Eng. 203-204	1	3	1	3
English 201-202	3	3	3	3
Military Art 201-202	3	4	3	4
Totals	21	28	21	28

Junior Year

Carding and Spinning, Textile Eng. 301-302	3	5	3	5
Weaving, Textile Eng. 303-304	2	4	2	4
Calculus, Mathematics 301-302	4	4	4	4
Heat Engines, Mechanical Eng. 301-302	3	3	3	3
Laboratory, Mechanical Eng. 307-308	1	2	1	2
Mechanics, Civil Eng. 311-312	3	3	3	3
Spanish, Mod. Lang. 307-308	2	2	2	2
	18	23	18	23
Minimum electives	4	4	4	4
Totals	22	27	22	27
Electives:				
Military Art 301-302	4	5	4	5
or				
Economics, 301-302	2	2	2	2
and one of the following:				
Sociology, Econ. 303-304	2	2	2	2
French, Mod. Lang. 301-302	2	2	2	2
Teacher Training, Textile Manufacturing 313-314	2	2	2	2
Subjects in other departments which can be scheduled.				

Senior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Eng. 401-402	3	4	3	4
Weaving, Textile Engineering 403-404	2	4	2	4
Electrical Engineering 301-302	3	3	3	3
Electrical Engineering, Laboratory, 305-306	2	4	2	4
Mechanics of Materials, Civil Eng. 407	3	3	0	0
Reinforced Concrete, Civil Eng. 408	0	0	3	3
Power Plants, Mechanical Eng. 401-402	3	3	3	3
Laboratory, Mechanical Eng. 415-416	2	4	2	4
	18	25	18	25
Minimum electives	4	4	4	4
Totals	22	29	22	29
Electives:				
Military Art 401-402	4	5	4	5
Or elect two subjects from the following list:				
Spanish, Mod. Lang. 405-406	3	3	3	3
Shop Organization, Econ. 405-406	2	2	2	2
Personal Administration and Industrial Problems, Econ. 407-408	2	2	2	2
Teacher Training, Textile Manufacturing, 413-414	2	2	2	2
English 401-402	3	3	3	3
Or subjects in other departments which can be scheduled.				

FOUR-YEAR COURSE IN TEXTILE CHEMISTRY AND DYEING.

This course is especially for those who wish to engage in any branch of Textile Chemistry, Dyeing, Bleaching, Finishing, or in the manufacture or sale of dyestuffs and chemicals used in the textile industry, and is designed to give a scientific technical education to those who desire to follow these branches of industrial technology.

Dyeing as an art has long been practiced, but with the introduction of scientific methods it is rapidly developing and assuming a position in the front rank of applied sciences.

As the textile industries of the State increase, the need of young men who have been trained in the principles as well as the practice of the different factory operations becomes apparent. In the course in Textile Chemistry and Dyeing the student is taught the different practical methods of the dyehouse; the chemistry of dyestuffs, some of each class of which he actually makes; the chemical changes brought about by mordants, assistants, etc. He also learns color matching, dye testing, and the methods for the analysis of the different chemicals used in the dyehouse. He carries on the study of carding, spinning, weaving, designing, cloth analysis, etc., to the end of the Sophomore year, with the other textile students, and with them devotes attention to shop work, drawing, etc., together with such general studies as English, Mathematics, Physics, and Chemistry, which are required in all four-year courses.

The Four-year Course in Textile Chemistry and Dyeing, leading to the degree of Bachelor of Science.

Freshman Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning, Textile Manufacturing 101-102	1	3	2	3
Weaving, Textile Manufacturing 103-104	2	3	2	3
Mechanical Drawing, Mechanical Eng. 103-104	1	3	2	4
Algebra, Mathematics 101	5	5	0	0
Geometry, Mathematics 104	0	0	4	4
Advanced Algebra, Mathematics 102	0	0	1	1
Chemistry 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Composition and Rhetoric, English 101-102	3	3	3	3
Citizenship, Econ. 101	2	3	0	0
Military Art 101-102	3	4	3	4
Totals	21	30	21	28

Sophomore Year

Carding and Spinning, Textile Manufacturing 201-202	2	3	2	4
Weaving, Textile Manufacturing 203-204	2	3	2	3
Designing, Textile Manufacturing 205-206	2	4	2	2
Cloth Analysis, Textile Manufacturing 208	0	0	1	2
Physics 205-206	2	2	2	2
Physics, Laboratory, 209-210	1	2	0	0
Analytical Chemistry and Dyeing, Tex. 209-210	2	4	2	4
Trigonometry, Mathematics 201	5	5	0	0
Analytical Geometry, Mathematics 202	0	0	5	5
English 201-202	3	3	3	3
Military Art 201-202	3	4	3	4
Totals	22	30	22	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; Second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name, or abbreviation, of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Chemistry, Organic, 301-302	3	3	3	3
Chemistry, Organic, Laboratory, 303-304	1	3	1	3
Chemistry (Quantitative Analysis) 305-306	2	4	2	4
Dyeing, Textile Manufacturing 309-310	2	2	2	2
Dyeing, Laboratory, Textile Manufacturing 311-312	4	8	4	8
English 301-302	3	3	3	3
German, Mod. Lang. 201-202	2	2	2	2
	17	25	17	25
Minimum electives	4	4	4	4
Totals	21	29	21	29
Electives:				
Military Art 301-302	4	5	4	5
or				
Economics 301-302	2	2	2	2
and one of the following:				
Textile subject	2	2	2	2
French, Mod. Lang. 301-302	2	2	2	2
Sociology, Econ. 303-304	2	2	2	2
Teacher Training, Textile Manufacturing 313-314	2	2	2	2

Senior Year

Chemistry, Historical, 401	2	2	0	0
Chemistry, Industrial, 402	2	2	4	4
Chemistry (Quantitative Analysis) 409-410	6	12	6	12
Dyeing 409-410	3	3	3	3
Dyeing, Laboratory, 411-412	4	8	4	8
	17	27	17	27
Minimum electives	4	4	4	4
Totals	21	31	21	31
Electives:				
Military Art 401-402	4	5	4	5
Or two subjects from the following list:				
German, Mod. Lang. 303-304	3	3	3	3
English 401-402	3	3	3	3
Teacher Training, Textile Manufacturing 413-414	2	2	2	2
Textile subject	2	2	2	2
Shop Organization, Econ. 405-406	2	2	2	2
Personal Administration, Econ. 407-408	2	2	2	2

TWO-YEAR COURSE IN TEXTILE MANUFACTURING

This course is intended for young men who desire to learn some of the fundamental principles of Textile Manufacturing, and other subjects which will be of value in this work. The various textile subjects are taught by lecture and practical work on carding, spinning, and weaving machinery.

TWO-YEAR COURSE IN TEXTILE MANUFACTURING

First Year

Subjects	First Term		Second Term	
	Periods	Hours	Periods	Hours
Carding and Spinning 11-12	1	3	1	3
Weaving 21-22	3	5	3	5
Designing Tex. Mfg. 31-32	2	4	1	2
Cloth Analysis 42	0	0	1	2
Drawing, M. E. 11-12	1	3	2	4
Forge Work M. E. 31	1	3	1	3
Algebra 11	5	5	0	0
Geometry 12	0	0	5	5
English 11-12	3	3	3	3
Military Art 101-102	3	4	3	4
Totals	19	30	20	31

Second Year

Carding and Spinning 11-12	3	6	3	6
Weaving 21-22	3	6	3	6
Designing Tex. Mfg. 31-32	3	4	2	2
Cloth Analysis 42	0	0	1	2
Drawing M. E. 51-52	1	3	1	3
Machine Shop M. E. 61-62	1	3	1	3
English 101-102	3	3	3	3
Military Art 201-202	3	4	3	4
Totals	17	29	17	29

DESCRIPTION OF SUBJECTS

AGRICULTURAL ENGINEERING.

102. Agricultural Engineering. Farm shop work will consist of teaching the agricultural student how to do the ordinary repair and construction work which arises on the farm, with such tools and equipment as the average farmer may reasonably be expected to have. Sufficient elementary drawing and blueprint reading will be given to enable the student to sketch the broken part of the machine and order a duplicate if necessary. Each article made in this course must be useful on the farm. Required of Freshmen in Agriculture. Four periods, second term.

306. Farm Motors. The practical study of the farm gas and steam engine, their use, care and repair. Laboratory practice will consist of the operation, care and repair of different types of farm gas and steam engines. Brake horsepower and fuel economy tests will be run by the students. Three periods, second term. Required of Juniors in Agricultural Engineering. Elective for other Juniors. Professor BOSQUE.

308. Farm Mechanics. This course is especially designed for those intending to teach Agriculture in vocational high schools. The work will include such subjects as are usually taught in vocational high schools, and will include soldering, tinning, erection of line shafting, belt lacing, power transmission, pipe fitting, farm wood work, and sufficient forging to enable the student to make ordinary farm repairs. One period, second term. Required of Juniors in Agricultural Engineering. Elective for Juniors. Professor BOSQUE.

301. Farm Machinery and Repair. This is a practical course designed for students who wish to perfect themselves in the operation and care of all types of farm machinery. Laboratory practice will consist of a detailed study of the construction, design, calibration, and operation of tilling, cultivating, and harvesting machinery. Such other machinery as ensilage cutters, terracing machines, hay balers, etc., will also be studied. Three periods, first term. Elective for Juniors. Required in Agricultural Engineering.

303. Farm Buildings and Concrete. The study of building materials, designs and construction of farm buildings, and building location. Ventilation, lighting, heating, water supply, plumbing, and sewage disposal will be studied briefly in their relation to rural conditions. Laboratory practice consists of the design and construction of molds and forms, and study of methods

of reinforcing, and proportions of mixture to be used in various farm buildings and equipment. Complete working drawings, with tracings and blueprints of some of the farm buildings will be made. Three periods, first term. Elective for Juniors. Required in Agricultural Engineering.

403. Terracing and Farm Surveying. Theory to consist of chain surveying; adjustments and use of the instruments in leveling, compass and transit surveying, with special reference to application on farms. The necessary trigonometric formulas are taught in connection with this course. Practice in differential and profile leveling, use of precise and home-made levels in location of terraces, adjustment of levels, construction of the broad terrace and the soil saving dam. Trips will be made to terraced fields; one or more lectures illustrated with slides will be given. Three periods, first term. Elective for Seniors. Required in Agricultural Engineering.

401. Farm Equipment. A study of farm and home equipment necessary for the up-to-date farm. Thorough study of tillage, seeding, haying, and harvesting machinery, water supply, sewage disposal, home light and power. Selection, cost, depreciation, and upkeep of farm equipment. Three periods, first term. Required of all Seniors in Agriculture.

405. Tractors. The practical study of the care, operation, and handling of both steam and gas tractors. Laboratory practice to consist of the practical operation of tractors, making brake and drawbar tests when operating under field conditions; fuel economy tests will also be made. Two periods, first term. Required of Seniors in Agricultural Engineering. Elective for other Agricultural Seniors. Prerequisite: Farm Motors 306.

408. Pumps and Power Problems. A study of elementary hydraulics and its application to farm pumping and water supply; the use of electricity for light and power. Two periods, second term. Required of Seniors in Agricultural Engineering.

404. Farm Light Plants, Etc. A course for advanced undergraduates who are especially interested in solving some agricultural engineering problem of this nature. Two periods, second term. Required of Seniors in Agricultural Engineering.

407. Advanced Testing. In this course the student will have the opportunity to investigate some problem of agricultural engineering value, such as the comparative cost of gasoline and kerosene as fuel for tractor plowing. Problems of an entirely different

nature may be undertaken, such as investigations of water supply, or lighting systems for North Carolina farms. One period, first term. Required of Seniors in Agricultural Engineering.

406. Research Work. The study of agricultural engineering problems which affect the farming interest of North Carolina, especially those that pertain to tractors and tractor-drawn machinery. Two periods, second term. Required of Seniors in Agricultural Engineering. Professor BOSQUE.

REHABILITATION DIVISION

Farm Machinery. This is a practical study of the usual machinery equipment of a farm; plows, harrows, planters, cultivators, grain drills, mowing machines, etc. The selection of equipment to save man and horse labor is emphasized.

Farm Machinery Repair. This is a practical course in the care and repair of the usual machinery found on the average farm. Laboratory practice will consist of the use of tools for repair work, and as far as possible practical work with the machinery in need of repair.

Farm Buildings and Concrete. An elementary course in the study of building materials, design and construction of farm buildings, and building location. Construction of concrete water troughs, posts, culverts, etc., will be studied. Laboratory practice will consist of the design and construction of molds and forms, methods of reinforcing, and proportions of mixtures to be used in various structures used on the farm.

Gas Engines and Tractors. A practical study of the farm gas engine, its use, care and repair. Tractors will be studied with reference to care and operation of both steam and gas types. This will be given in the most simple form so that students will become familiar with the different engines adapted to farm conditions. Laboratory practice to consist of the operation, care, and repair of the different types of farm gas engines. Brake horsepower and fuel economy tests, and drawbar tests when operating under field conditions, will be made.

Short Courses

11. Agricultural Drawing. The use and care of common drafting tools, and the application of drawing to agricultural work. Plans of simple structures, and free-hand sketching of machinery parts. One period, first term. (Two-year course.)

12. Farm Shop Work. Use and care of carpentry tools, and instruction in carpentry exercises. Construction of small buildings. Cement and concrete in farm work. Mixing, proportioning, and placing. One period, second term. (Two-year course.)

21. Farm Mechanics. The six simple machines; their application to machinery on the farm; force, work, power; strength of materials; the application of physical principles to agriculture. Three periods, first term. (Two-year course.)

22. Farm Equipment. A study of farm machines; selection, strength, materials and qualities of tillage, planting, cultivating, and harvesting machinery. Farm fences; buildings and home-built equipment. Sewage disposal; water supply; farm light and power plants. Three periods, second term. (Two-year course.)

Gas Engines, Farm Tractors and Machinery. Selection and operation of gas engines and tractors. Engine types and principles. Engine and tractor systems and accessories. When possible, specialists will be secured for intensive work on ignition, lubrication, governing and colling systems. Fitting the tractor to the farm. Power farming. (Two-weeks course.)

ANIMAL HUSBANDRY AND DAIRYING

101. Types and Market Classes of Livestock. A survey of the development of the livestock industry, with special reference to present conditions. Consideration is given to the fundamental principles of livestock judging; the relation of form to function, or production; the combination of characters indicating constitutional strength, temperament, capacity, and sexuality necessary in the development of animals for special purposes such as milk, meat, work, and speed production. Time is devoted to the market requirements of livestock and adaptation of the different types. First term, two periods. Required of Freshmen. Assistant Professor Haig.

202. Elements of Dairying. This course consists of the discussion of the fundamental principles of dairying. Lectures are given on the secretion and composition of milk, the testing of milk and cream for butter fat; the care of milk and cream; the construction, operation, and care of the cream separator. Butter making and cheese making are discussed briefly. In the laboratory practical work is given in the testing of milk and cream, in the operation of cream separators, and in farm butter making. Second term, three periods. Required of Sophomores. Laboratory fee, $4. Assistant Professor Haig.

401. Dairy Cattle and Milk Production. Dairy husbandry is studied largely in its relation to the producer of milk. The dairy breeds are considered as to their characteristics and adaptation. Problems of the dairy farmer such as selection, management, feeding, calf raising, and dairy cattle barns are discussed. The laboratory work consists of studying dairy types and selection by judging. First term, three periods. Required of Seniors in Veterinary Medicine. Elective for all other Seniors except those in Agricultural Chemistry. Professor RUFFNER.

303. Sheep Production. Sheep husbandry is studied in its relation to mutton and wool production. Lectures and text-book readings emphasize practical methods of selection, handling the flock, feeding, housing, and marketing sheep and wool. Laboratory work is a study of types and breed characteristics, their relation to mutton and wool production, and the selection of sheep by judging. First term, three periods. Elective for Juniors in Animal Husbandry. Professor RUFFNER.

301. Animal Nutrition. This course consists of lectures and recitations on the principles of animal nutrition, including the physiology of the digestion of feeds, the uses of nutrients in the body, feeding standards as adapted to different classes of farm animals, and a general survey of feeding stuffs. First term, three periods. Required of Juniors in all Agricultural Courses. Professor RUFFNER.

305. Swine Production. The discussion of types, breed characteristics, and adaptability of swine. Lectures emphasize the questions of breeding, feeding, housing, and marketing of swine. Practical work is given in the laboratory in selecting by judging. First term, three periods. Required of Juniors in Veterinary Medicine. Elective for all other Juniors except those in Agricultural Chemistry. Assistant Professor HAIG.

403. Animal Breeding. The improvement of domestic animals; variation and heredity of animal character; reproduction, development, selection, line breeding, inbreeding, cross-breeding, grading, and other factors dealing with the improvement of farm animals. First term, three periods. Required of Seniors in Veterinary Medicine. Elective for all other Seniors except those in Agricultural Chemistry. Professor RUFFNER.

405. Horse, Mule, and Beef Production. The first half of this course deals with methods of breeding, feeding, and handling horses and mules; the care and management of stallions, mares, foals, and

work animals. The breeds are discussed as to their importance in the South. The horses and mules on the College farm are used in practice judging and selecting.

The second part of the term is devoted to a study of practical methods of selecting, feeding, management, finishing, and marketing beef cattle in North Carolina. Consideration is given to the breeder, feeder, butcher, and consumer. The course also emphasizes types, judging, breeds and market classes, and grades. A few animals are kept for this purpose. First term, three periods. Elective for all Seniors in Agriculture except students in Veterinary Medicine and Agricultural Chemistry. Assistant Professor HAIG.

304. Advanced Stock Judging. In this course consideration is given to animal conformation, quality, and condition with reference to market and show-yard requirements; to the selection of horses, beef cattle, dairy cattle, sheep, and swine for the feed lot, the market, and exhibition, and to judging at livestock shows. Second term, three periods. Required of Juniors in Veterinary Medicine, Vocational Education and Animal Husbandry. Elective for all other Juniors except those in Agricultural Chemistry. Professor RUFFNER.

402. Farm Meats and Stock Farm Management. The first half of the term is devoted to questions relative to farm butchering, curing, and care of meats and the various products. A smokehouse is available, so that the studies can be made practical. The second half of the term is devoted to a study of successful methods of operating farms devoted chiefly to livestock production. A study of the best systems applied to North Carolina conditions. Second term, three periods. Elective for Seniors in Animal Husbandry. Professor RUFFNER and Assistant Professor HAIG.

404. Pedigree Study. A study of the blood lines of the various breeds of livestock. Each student is expected to select one or two breeds of which he makes a special study, working out the pedigrees from the herd books of the most noted animals. Special study is made of the animals owned by breeders in North Carolina. Second term, three periods. Elective for Seniors in Animal Husbandry. Professor RUFFNER.

Courses for Graduates

Students entering graduate work in Animal Industry should have a thorough training in the fundamental principles of the subject. The following graduate courses are offered:

501-502. Animal Nutrition. In this course there will be a study of recent scientific publications on the chemistry and physiology

of the nutrition of animals and the chemical and physiological changes and processes involved in the activities of animal life. The student will be expected to follow out courses in assigned reading, hold conferences with the instructor, and submit regular reports on the progress of his studies. First and second terms.

503-504. Investigational Work. Students who wish to continue their studies along any particular line in the Department of Animal Husbandry and Dairying may, with the aid of the head of the department, select a definite investigational project, and devote at least half time to carrying on the investigation.

Short Courses

11. Breeds and Judging. The student begins with the breeds of livestock, making a thorough study of their development and characteristics and also of the pedigrees and performances of superior individuals among horses, cattle, sheep, and swine. The practical part of the course is devoted to the judging of horses, dairy cattle, beef cattle, sheep, and swine. Three periods. First year, first term. Mr. Haig.

21. Feeds and Feeding. This course embraces the principles and practice of animal feeding. After covering the principles of feeding it takes up the composition of feeding stuffs, their combinations into properly balanced rations, and the relation between the sustenance of animals and their products. Problems relating to balanced rations are solved. Three periods. First term, second year. Professor Ruffner.

22. Farm Dairying. This course takes up a study of the care and handling of milk and cream on the farm, centrifugal separation, pasteurization, the testing of milk and milk products, and development of young dairy stock and the feeding of cows for the most economical production. Three periods. Second term, second year. Professor Ruffner.

Two-Year Course for Rehabilitation Students

FIRST YEAR

Each student will be required to take a prerequisite course, unless he has already had its equivalent before entering the following courses as outlined:

1. Breeds and Judging. This course will consist of a brief study of the various types and breeds of horses, cattle, sheep, and swine. The characteristics of the more important breeds, their use, and

adaptation and value to the farmer will be pointed out in the classroom. The practical work will consist in the judging of animals on the farm. Four periods, first term. Mr. Long.

2. Feeds and Feeding. A study of homegrown feeds and their relation to the feeding of farm animals. A study will also be made of the feeding standards as adapted to the various classes of farm animals. Practical balancing of rations for the different classes of farm animals with particular reference to the cost. The student will be given both instruction and practice in mixing of feeds. Four periods, second term. Mr. Long.

SECOND YEAR

1. Dairying. A study of dairy type, breed characteristics and adaptation, testing of milk, butter making. The problem of feeding and management is studied in connection with the production of milk. Three periods, first term. Mr. Long.

2. Swine Production. A study of the types, breed characteristics, breeding, feeding, housing, and marketing of swine. Practical work consists in selecting by judging. Four periods, third term. Mr. Long.

Courses for Rehabilitation Students

Physical Geography. A study of the effect of the natural agencies on the earth's surface. Causes and movements of the winds; rain and snow; carving of land farms; plant and animal life under various conditions of topography and climate. First and second terms, third grade. Five hours a week.

Geology. A study of the formation of soil and its characteristics as determined by the climate and origin. Third term, third grade. Five hours a week.

Soils and Soil Fertility. A study of the effect of physical properties, plant food content, cultivation, rotation, and fertilization on the productiveness of soils. Third term, second grade. Five hours a week.

Two-Weeks Course

Farm Dairying. This course is given to furnish the student instruction regarding the dairy industry. It should be of use and interest to any farmer, whether he is especially interested in making dairy farming the largest part of the farm operations or not. The subject material includes the testing of milk and cream for butterfat, need and value of testing individual cows, the composition and properties of milk, its food value and use as a food, the separation

of cream and farm butter-making, and the proper methods of handling milk and cream. It is the aim of this course to enable the student to recognize a good cow from a poor one and to feed his animals for profitable production. All discussions and work will be taken up from the farm viewpoint.

Types and Market Classes of Livestock. This course will consist of a brief study of the most important breeds and market classes of horses, cattle, sheep and swine. Their history, development, distinctive characteristics, adaptation and value to the stockman, butcher, and consumer, will be studied. The differences in function and conformation between pure-bred animals and scrubs, or natives, will be pointed out and emphasized. By lectures, demonstrations, and personal score-card practice, the students will learn the good points and defects of animals before them. After the use of the score-card is learned, work will be given in competitive judging.

BOTANY

Four-Year Courses

101-102. General Botany. This course, which is basic for all plant work in the college, presents the fundamental structural and functional facts concerning plants. The first term is devoted to the nature of crop plants, the student mastering the fundamental facts concerning their cells, tissues, and organs, together with the activities of these parts. In the second term a survey of the plant world is made, representative types being used to illustrate the principal groups. The comparative method is emphasized throughout; the student acquires some definite conceptions of evolution as it is exhibited in plants. Such highly important economic groups as bacteria, fungi (causing plant disease), and the crop producing plant families, receive special attention. Field studies of the plants on and near the campus are made. Fee $2 for the year. Five periods throughout the year. Required of all Freshmen in Agriculture. Professor Wells, Mr. Shunk.

301. Plant Diseases. This course consists of a survey of the more important plant diseases with the emphasis upon those which affect the crop plants of the South. Attention is not only given to symptoms exhibited by the host plant, but detailed studies are made of the causal organism with particular reference to its reproduction, with which stage or stages the spread of most diseases is associated. Control measures are also given a prominent place in the course. Fee, $1. Three periods, first term. Required of all Juniors in Agri-

culture except Veterinary and Agricultural Chemistry students. Elective for Agricultural Chemistry. Prerequisites, Botany 101-102. Professor WELLS.

302. Agricultural Bacteriology. The subject-matter of this course includes an introduction to the principles of bacteriology, and is designed to serve as a basis for students contemplating specialization in applied phases of the subject, such as bacteria in relation to plant diseases, to human diseases, and to the diseases of domestic animals; soil bacteriology; dairy bacteriology; sanitation with reference to sewage disposal and water supplies; and the consideration of bacterially produced processes in the industries. The student becomes familiar through laboratory practice with methods employed in the culture and study of bacteria. Prerequisites, Botany 101-102. Fee $3. Three periods, second term. Required of all Juniors in Agriculture. Mr. SHUNK.

303-304. Advanced Plant Morphology. The student in this makes a survey of the plant world, studying newer types than those seen in course 101-102. The work is conducted throughout from the comparative anatomical standpoint so that probable phylogenies are determined in so far as the comparative method makes this possible. Emphasis is given to the fungi and the green land plants. In the latter series an original diagrammatic method is used to help the student master the intricacies involved in the study of the evolution of these forms which are characterized by alternation-of-generations. Prerequisites, Botany 101-102. Fee $2. Three or five periods, either term. Elective for Juniors in Biology. Professor WELLS, Mr. SHUNK.

403-404. Advanced Plant Physiology. In this course opportunity is offered the student to acquaint himself with plant activities in a more intimate fashion than was possible in the general botany course (101-102). The student performs a series of advanced experiments, taking note throughout of quantitative as well as qualitative data. The aim striven for is to enable the student on the basis of first-hand information to properly and exactly visualize the plant from the functional standpoint. Prerequisite, Botany 101-102. Fee, $3. Three periods, either term. Required of Juniors in Soils. Elective for all Seniors except those in Veterinary Medicine and Agricultural Chemistry. Professor WELLS, Mr. SHUNK.

406. Systematic Botany. A course designed primarily to acquaint the student with the plants of the State, both cultivated and wild, and secondarily to give him some definite notions in regard to plant groups and their relationships. A broad knowledge of plant

types is a genuine desideratum as a basis of most plant production work, especially in such fields of activity as Agronomy, Horticulture, and Forestry. Three periods. Second term. Elective for all Seniors except those in Veterinary Medicine and Agricultural Chemistry. Prerequisites, Botany 101-102. Professor WELLS.

Genetics. Course offered in collaboration with Department of Zoology. See Zoology 302. Professors METCALF and WELLS.

408. Medical Botany. This course deals with medical plants and the poisonous plants of the United States which are known to cause losses in livestock. Identification of the local poisonous forms in the field will constitute a definite part of the course. The nature of the poisonous principles and their effects on animals are given attention. Two periods, second term. Required of Senior Veterinary Students. Prerequisite, Botany 101-102. Professor WELLS.

401. Advanced Bacteriology. Those who desire a more comprehensive knowledge in any of the special fields of bacteriology in order to fit themselves to enter into extension or investigational work may take this course. Elective for all Seniors except Veterinary students. Three periods, first term. Prerequisite, Botany 302. Mr. SHUNK.

410. Plant Ecology. A lecture and field course presenting the basic facts concerning the influence of environment in controlling the distribution of plants. Some attention is also given to those structural adaptations in plants which are found associated with particular environments. The course closes with an investigation into the contribution that Ecology makes to the solution of certain crop problems, especially those that arise out of soil and climate situations. Prerequisites, Botany 101-102. Three periods, second term. Elective for all Seniors except those in Veterinary Medicine and Agicultural Chemistry. Professor WELLS.

Short Courses

11-12. Plant Life. A simplified course especially prepared for the two-year student. The fundamental facts concerning the crop plants are presented, together with the structure and activities of the roots, stems, leaves, flowers, and fruits, and their relation to food production. In the laboratory and field the student enjoys the opportunity to acquire his knowledge first-hand, or in a way in which it will be of the most value to him later. The practical applications of botanical knowledge are pointed out as the course progresses. Three periods throughout the first year. Professor WELLS, Mr. SHUNK.

21. Plant Diseases. A study of the principal diseases affecting North Carolina crop plants with the emphasis on the following: (1) the annual loss to farm crops caused by diseases, (2) the increasing destructiveness of diseases in intensified farming, (3) the appearance and means of identifying the more important diseases, (4) the agencies concerned in the spread of plant diseases, (5) control measures. Three periods, first term, second year. Prerequisite, Plant Life 11-12. Professor WELLS, Mr. SHUNK.

Rehabilitation Course

Plant Life. A course dealing chiefly with the external features of plant structures. Its aim is to give to the rehabilitation student sufficient knowledge of the structure and activities of crop plants to make his agricultural work intelligible. Five hours.

Two-Weeks Course

Diseases of Crops. This course will consist of lectures and practical exercises dealing with the destructive diseases of the important crops of the State. The following points will be especially emphasized: (1) The annual loss to farm crops caused by diseases; (2) the increasing destructiveness of diseases in intensified farming; (3) the appearance and means of identifying the more important diseases; (4) agencies concerned in the spread of plant disease; (5) selection of uninfected seed. Professor WELLS.

CHEMISTRY

101-102. Inorganic Chemistry. McPherson and Henderson's *Elementary Study of Chemistry.* The common elements and their principal compounds, together with the fundamental principles of the science, are studied by means of lectures and recitations. (*a*) Two periods, both terms. Required of Agricultural Freshmen. (*b*) Three periods, both terms. Required of other Freshmen. Professor WITHERS, Mr. MARION, Mr. JORDAN, Mr. SMITH, and Mr. PARKS.

103-104. Inorganic Chemistry. Laboratory work. McPherson and Henderson's *Exercises in Chemistry.* Here, under the eye of the instructor, experiments illustrating and emphasizing the work of the classroom are performed by the student. One period, both terms. Required of Agricultural Freshmen. Fee, $2. One period, both terms. Required of other Freshmen. Fee, $3. Mr. MARION, Mr. JORDAN, Mr. SMITH, and Mr. PARKS.

201. Qualitative Analysis. Tower's *Qualitative Chemical Analysis.* A discussion of the principles involved in chemical analysis, together with laboratory work. The student is given thorough practice in the identification of the more common ions, and in the complete analysis of mixtures of pure salts, commercial products, alloys, and minerals. Three periods, first term. Required of Sophomores in Agriculture and Chemistry. Fee, $2. Assistant Professor RANDOLPH and Mr. MARION.

202. Quantitative Analysis. In this course the student is introduced to the principles involved in titrometric determinations in volumetric quantitative analysis.

The student is taught to make up and standardize solutions to be used in acidimetry and alkalimetry, and also is taught the use of such solutions as potassium permanganate and potassium dichromate in various determinations. Three periods, second term. Required of Sophomores in Chemistry. Fee, $2. Assistant Professor RANDOLPH.

204. Organic Chemistry. Chamberlain's *Agricultural Organic Chemistry.* A study of the organic compounds most closely related to Agriculture, followed by a study of the composition of plants and animals; animal food and nutrition; digestion and absorption; metabolism; milk; blood and urine; plant physiology; occurrence and use of important constituents in agricultural plants; animal foods and feeding. Two periods, second term. Required of Agricultural Sophomores. Mr. MARION.

206. Organic Chemistry. Laboratory work to accompany 204. One period, second term. Required of Agricultural Sophomores. MR. MARION.

301-302. Organic Chemistry. Stoddard's *Introduction to Organic Chemistry.* A study of the fundamental principles of Organic Chemistry and of the most important organic compounds. Three periods. Required of Juniors in Chemistry and Textile Chemistry, both terms; Agicultural Chemistry, first term. Professor WITHERS.

303-304. Organic Chemistry. Laboratory work to accompany course 301-302. Fisher's *Laboratory Manual of Organic Chemistry.* One period, both terms. Required of Juniors in all Chemical courses. Students in Agricultural Chemistry may take in either Junior or Senior years. Fee, $1. Associate Professor WILLIAMS.

305-306. Quantitative Analysis. Smith's *Quantitative Analysis.* Gravimetric and volumetric analysis of pure salts at first, and later of substances of agricultural and industrial importance. Three pe-

riods, both terms. Required of Juniors in all Chemical courses. Three periods, first term. Required of Juniors in Veterinary Medicine. Fee, $3. Associate Professor WILLIAMS.

307-308. Electro-chemistry. Some of the topics treated are electrolytic conduction; the principles involved in corrosion, electrodeposition, and refining of metals, including electroanalysis; electrometric titrations; furnace control and uses; production of some important substances used in industries. Three periods, both terms. Required of Juniors in Chemistry. Fee, $2. Assistant Professor RANDOLPH.

309-310. Laboratory Course in Electro-chemistry. Laboratory work to accompany course 307-308. In this course we have practice in the general principles of the subject, including such features as the general manipulation of the electric current to chemical operations, specific resistance and resistivity of electrolytes, polarization, temperature coefficient of resistance of an electrolyte, transference numbers, specific conductance, degree of dissociation, primary cells, storage batteries, electromotive force, single potentials, potentiometric determination, corrosion of metals, deposition of metals, electroplating, electrotyping, electrolytic titration, operations of the electric furnace, synthesis of commercial products, electrometallurgy and refining of metals, etc. One period, both terms. Required of Juniors in Chemistry. Fee, $2. DR. RANDOLPH.

312. Physiological Chemistry. Matthew's *Physiological Chemistry.* Two periods, second term. Required of Juniors in Veterinary Medicine and Agricultural Chemistry. Elective for Chemical Seniors. Mr. JORDAN.

314. Physiological Chemistry. Laboratory work to accompany course 312. One period, second term. Fee, $2. Required of Juniors in Veterinary Medicine and Agricultural Chemistry. Elective for Chemical Seniors. Mr. JORDAN.

315-316. Agricultural Analysis. Association of Official Agricultural Chemists, *Methods of Analysis.* Gravimetric and volumetric analysis. Special attention is given to the determination of elements in fertilizers, feed stuffs, and other substances of special interest to students in Soils. Three periods, both terms. Required of Juniors in Soils. Fee, $2. Associate Professor WILLIAMS.

401. Historical Chemistry. Moore's *History of Chemistry.* Two periods, first term. Required of Seniors in all Chemical courses. Professor WITHERS.

402. Industrial Chemistry. Thorp's *Outlines of Industrial Chemistry.* A study of the outlines of industrial chemistry, with especial attention to the rapidly growing chemical industries of North Carolina and of the South. This course, which will be made thoroughly practical, will emphasize the intimate relation of chemical industry to agriculture and to all branches of engineering. Two periods, second term. Required of Seniors in Chemistry and Agricultural Chemistry. Two periods, first term, four periods, second term. Required of Seniors in Textile Chemistry. Professor WITHERS.

404. Inorganic Chemistry, Advanced. A lecture course in which is discussed the development of the science of chemistry, special attention being given to the periodic law, radioactivity, the coördination theory, and the modern trend of chemical thought. Two periods, second term. Required of Seniors in Chemistry and Agricultural Chemistry. Associate Professor WILLIAMS.

403. Microchemical Analysis. Chamot's *Elementary Chemical Microscopy.* A laboratory course in which the common elements are detected by means of the microscope. The student is also taught to identify such fabrics as silk, wool, linen, cotton, etc., and to analyze alloys, soils, fertilizers, and other commercial products for their constituents. Two periods, first term. Fee, $1. Required of Seniors in Chemistry and Agricultural Chemistry. Associate Professor WILLIAMS.

405-406. Physical Chemistry. Jones's *Introduction to Physical Chemistry.* The fundamental principles of Physical Chemistry are taken up, including the constitution of matter, the gas laws, thermochemistry, photochemistry, electrochemistry, chemical dynamics, and equilibrium, emphasis being laid on the phenomena of solutions. Three periods, both terms. Required of Seniors in Chemistry. Elective for Seniors in Electrical Engineering. Assistant Professor RANDOLPH.

407-408. Physical Chemistry. Laboratory work. Here the student carries out experiments involving molecular weight determinations, lowering of freezing point, elevation of boiling point, conductivity measurements, and other determinations as they are deemed expedient. One period, both terms. Required of Seniors in Chemistry. Fee, $2. Associate Professor WILLIAMS.

409-410. Quantitative Analysis. A continuation of course 305-306. Both terms: Six periods. Required of Seniors in Chemistry and Textile Chemistry. Three periods. Elective for Seniors in Agricultural Chemistry. Fee, $6. Associate Professor WILLIAMS.

411-412. Organic Chemistry, Advanced. Lecture and laboratory work. In this course the student is required to make special preparations which require reference to the literature, with lectures on the experiments. Prerequisite, Organic Chemistry 303-304. Three periods, both terms. Elective for Seniors in Chemistry and Agricultural Chemistry. Fee, $3. Associate Professor WILLIAMS.

413. Agricultural Physical Chemistry. Getman's *Physical Chemistry.* The general principles of Physical Chemistry are studied with special reference to the phenomena which pertain to agricultural interests, such as the gas laws, photochemistry, osmosis, dialysis, colloids, theory of solutions, chemical equilibrium, available energy, properties of gases, liquids, and solids, and polarization. The laboratory work to accompany this course carries out experiments illustrating the subjects studied in the classroom. Three periods, first term. Required of Seniors in Agricultural Chemistry and Soils. Assistant Professor RANDOLPH.

414. Soil Analysis. Association of Official Agricultural Chemists, *Methods of Analysis.* Determination of the chief constituents of soils, with special reference to elements essential to plant food. Analysis of materials used as sources of plant food. Three periods, second term. Required of Seniors in Soils and Agricultural Chemistry. Fee, $2. Associate Professor WILLIAMS.

Chemistry for Agricultural Short Course

11-12. Farm Chemistry. Tottingham and Ince's *Chemistry of the Farm and Home.* The following topics will be discussed:

Water and Its Constituent Elements. Distribution, kinds, circulation, purification, physical properties, solution, chemical properties, usefulness, climatic effects; relation to water in soil and to plant and animal life; use in the arts; oxygen, ozone, hydrogen, hydrogen peroxide, symbols, formulas, equations.

The Atmosphere and Its Chief Constituent, Nitrogen. Composition, nitrogen, acids, bases, salts, ammonia, nitric acid.

Some Other Nonmetals. Chlorine, sulphur, phosphorus, carbon, simple organic compounds, silicon.

A Few Important Metals. Occurrence, extraction, sodium, potassium, calcium, copper, magnesium, zinc, iron, aluminum.

The Plant and Its Products. Importance, composition, ash, growth, structure, chemical changes, enzymes, roots, stem, leaf, flower and fruit, nutrition, crops, harvesting, environment, rotation.

The Soil. Origin, formation, soil minerals, humus, pulverizing agents, texture, physical properties, heat-absorbing power, chemical properties, nitrification, retention of fertilizers, alkali soils, analysis.

Fertilizers. Classes, inspection, terms, values, home mixing, soil amendment, application, choice for specific crop systems.

Farm Manure. Importance, source, amount, value, manurial value of feeding stuffs, manure of different animals, urine, losses, spreading, absorbents, preservatives, increasing value, use, effects, green manuring, sewage.

The Animal and Its Products. Parts, composition, nutrition, digestion, respiration, assimilation, excretion, skin, kidneys, products, efficiency.

The Feeding of Animals. Scientific foundation, nature and composition of feeding stuffs, building and fuel value, value of indigestible roughage, productive value of feeding stuffs, nutritive ratio, differences in food requirement, ash constituents, fuel needs, need of proteins, feeding standards, influence of food, condimental feeding stuffs, feeding-stuff laws.

Dairy Products. Importance, the udder, specific gravity of milk, chemical composition of milk, milk of different animals, milk of different breeds, lactation period, feeding stuffs, gases of milk, decomposition of milk, condensed milk, cream, centrifugal method, butter, rancidity, oleomargarine, overrun, buttermilk, cheese, composition of dairy products, butter and cheese flavors.

Human Food and Dietetics. Dietetic needs, fuel needs, protein needs, foodstuffs, meats, milk, eggs, vegetables, cereals, fruits, ciders, wines, vinegar, cooking, baking, toasting, cooking of vegetables, spices, flavors, beverages, balancing diet, cost of diet, preservation of food, labels, food laws.

Miscellaneous Materials of Importance in Daily Life. Cotton, flax, hemp, wool, silk, dyeing, dyes, cleaning, bleaching, paints and varnishes, cements and mortars, concrete, plaster, insecticides, fungicides, disinfectants.

The laboratory work by each student accompanies the classroom work. Three periods. Required the first year of the two-year Agricultural course. Mr. JORDAN.

Chemistry for Rehabilitation Students

Farm Chemistry. In this course the student will take up the study of some of the elements and compounds to be found in the atmosphere, water, soil, plants, animals, and animal products. Many experiments will be performed in the classroom. The student will also devote three hours a week to laboratory work, during which he will be able to secure first-hand study of the materials referred to in the course. Three periods, second term. Fee, $1. Mr. JORDAN.

CIVIL ENGINEERING

102. Engineering Lectures. Second term, one period. Required of Freshmen in Civil Engineering. What is expected of an engineer is pointed out in a broad way by lectures and reading for the purpose of impressing upon the student the importance of thoroughness and systematic preparation for his more specific work which follows the first year. Elementary use of the compass and chain, the level, and the manner of keeping notes are illustrated by a few periods of field work. Professor MANN.

201. History of Architecture. Required of Sophomores in Architectural and Civil Engineering. First term, two periods. A study of the various periods and styles of architecture from the primitive and prehistoric architecture up through the Gothic period. Text-book, Hamlin's *History of Architecture.* Associate Professor SHUMAKER.

202. Materials of Construction. Second term, two periods. Required of Sophomores in Civil and Architectural Engineering. Study of the properties of building materials, their strength and durability. Methods of preservation, weights, unit stress values; methods of manufacture; cost data. Text-book, Baker, *A Treatise of Masonry Construction.* Associate Professor SHUMAKER.

203-204. Elements of Design. Both terms, one period. Required of Sophomores in Architectural, Civil, and Textile Engineering. Architectural lettering and conventions. The classic orders of architecture. Problems in design, composition and planning. Associate Professor SHUMAKER.

205. Descriptive Geometry. First term, two periods. Required of Sophomores in Civil and Architectural Engineering. The point, line, and plane. Generation and classification of lines and surfaces. Surfaces of revolution. Intersections of surfaces by lines and other surfaces. Problems in shades and shadows and perspective drawing. Associate Professor SHUMAKER.

206. Surveying, Theoretical. Second term, two periods. Required of Sophomores in Civil Engineering and Architectural Engineering. Study of uses and adjustments of ordinary surveying instruments. Land surveying, traverse lines, leveling, city surveying, topographical surveying. Calculation of areas by latitude and departure stadia methods. Text-book, Breed and Hosmer, *Elementary Surveying.* Associate Professor SHUMAKER.

208. Surveying, Field Work. Second term, one period. Required of Sophomores in Civil Engineering and Architectural Engineering. Compass and transit surveys of small circuits showing use

of surveying instruments and the importance of accuracy in the execution of the work. Land surveys, level lines for establishing permanent bench marks.

301. Surveying, Theoretical. First term, two periods. Required of Juniors in Civil Engineering. Triangulations, astronomical observations for azimuth, precise leveling, filling in topographical details, plane table, hydrographic surveying, use of sextant and three-arm protractor. Text-book, Breed and Hosmer, *Higher Surveying.*

302. Railroad Engineering. Second term, two periods. Required of Juniors in Civil Engineering. Study of reconnaissance, preliminary, and location surveys for railroads. Mathematics of simple, compound, and reverse curves. Forms of railroad survey notes. Text-book, Searles and Ives's *Field Engineering.*

303. Surveying, Field Work. First term, one period. Required of Juniors in Civil Engineering. Surveys by azimuth of previously established circuits, checking all distances and calculated bearings and comparing measured distances and azimuths of cross lines on the circuit with calculated azimuths and distances.

304. Topographical Surveying. Second term, one period. Required of Juniors in Civil Engineering. Completed survey of a topographical circuit, including all notes for platting to be used in Topographical Drawing Course 306, contours and filling in for this circuit being made by stadia and plane table. Use of sextant on a small area purposing to represent soundings, and from these notes a hydrographic map is made in the Topographical Drawing Course 306. Staking out of simple, compound, and reverse railroad curves with transits from calculations made in Railroad Engineering Course 302.

306. Topographical Drawing. Second term, one period. Required of Juniors in Civil Engineering. Conventional signs and lettering. Completion of maps platted by latitude and departures from given survey data. Completed topographical map and completed hydrographic map from students' field notes taken in Surveying Course 304.

307. Highway Engineering. Masonry construction. First term, two periods. Required of all Juniors in Civil Engineering. Methods and costs of constructing foundations, dams, retaining walls, arches, piers, and other masonry structures. Text-book, Baker, *A Treatise on Masonry Construction.* Professor TUCKER.

308. Highway Engineering. Second term, two periods. Required of all Juniors in Civil Engineering. An elementary course in Highway Engineering. A study of the methods and materials used in the construction of country roads and city pavements. Study of road-building materials found in North Carolina. Professor TUCKER.

309. Graphic Statics. First term, one period. Required of Juniors in Civil and Architectural Engineering. A solution of mechanics' problems by graphical methods, the results being checked by analytical methods to impress the importance of accuracy in the performance of this manner of solutions. Problems using the funicular polygon. Bending moments and shears. Centroids of sections. Resultant pressure on retaining walls. Determination of the stresses caused by dead load, snow load, wind on fixed and free sides in framed structures, maximum and minimum stresses. Lectures and notes.

311. Mechanics. First term, three periods. Required of Juniors in Civil, Architectural, and Textile Engineering. Statics, including concurrent forces, parallel forces, nonconcurrent forces, nonparallel forces and friction. Both graphical and analytical methods are used, with numerous applications to various engineering problems. Text-book, Poorman's *Applied Mechanics*. Professor MANN.

312. Mechanics. Second term, three periods. Required of Juniors in Civil, Architectural, and Textile Engineering. Centroids and center of gravity. Moment of inertia. Elementary mechanics of materials with numerous applications to various engineering problems. Text-book, Poorman's *Applied Mechanics*, and problems. Professor MANN.

401. Roofs and Bridges. First term, three periods. Required of Seniors in Civil and Architectural Engineering. Study of the effects of dead and live loads uniformly distributed and concentrated on framed structures. Calculation by analytical method of stresses due to these loads. Wind and snow load stresses and reactions. Stresses from moving loads on highway bridges. Stresses due to train loads in railway bridges. Complete solution of roof truss and bridge problems. Text-book, Merriman and Jacoby's *Roofs and Bridges*. Professor MANN.

402. Bridge Design. Second term, three periods. Required of Seniors in Civil Engineering. The completed design and drawing of a combination wood and steel roof truss and a Pratt type pin-connected railroad bridge. The loading and specifications are given and the calculations for maximum and minimum stresses are first completed by the student, the parts then designed from which the completed drawing are made. Lectures and notes. Professor MANN.

404. Municipal Engineering. Second term, two periods. Required of Seniors in Civil and Architectural Engineering. Study of sewerage systems. Amount of sewage. Flow in sewers. Manhole and flush tank construction. Disposal systems. Surveys and forms

of field notes and manner of calculating data for the design and construction of a sewerage system. Original problems. Inspection of the system of Raleigh and suburbs. Text-book, Folwell's *Sewerage.* Professor MANN.

405. Railroad Surveying. First term, one period. Required of Seniors in Civil Engineering. Reconnaissance, preliminary, and location surveys for a section of railroad. The located line is cross-sectioned, the earthwork computed, and complete plans and estimates prepared, including a mass diagram. Location of railways and special problems in railroad engineering. Field and drafting room work. Professor TUCKER.

406. Civil Engineering Laboratory. Second term, one period. Required of Seniors in Civil and Architectural Engineering. Tests of materials of construction, including standard tests of Portland cement, standard tests of bitumens, standard tests of sand and stone, and the use of sieve analysis; curves; tension and compression tests of steel and concrete; rating and use of the planimeter; rating and use of the current meter; hydraulic measurements.

407. Mechanics of Materials. First term, three periods. Required of Seniors in Civil, Architectural and Textile Engineering. Study of the working stresses of material, stresses of beams, columns, and shafts; shear and flexure formulas, elastic deflections; rupture of beams; impact. Text-book, Merriman's *Mechanics of Materials.* Professor MANN.

408. Reinforced Concrete. Second term, three periods, required of Seniors in Civil and Textile Engineering; two periods, required of Seniors in Architectural Engineering. Study of the materials, general stress distribution, the derivation of formulas for working loads and for ultimate loads, bond and shear stresses; design of beams and columns. Numerous original problems are given and required to be solved by the theoretical formulas, and results checked by diagrams and curves. Text-book, Turneaure & Maurer's *Reinforced Concrete.* Professor MANN.

409. Hydraulics. First term, three periods. Required of Seniors in Civil Engineering. A course covering the principles of hydrostatics, pressure, laws governing flow in pipes and conduits, flow through orifices and nozzles and over weirs, and the losses from friction and other sources; methods of measuring the flow of streams; determination of waterpower in streams, and a study of the testing of hydraulic motors. Text-book, Merriman's *Treatise on Hydraulics.* Professor MANN.

410. Hydraulics. Second term, two periods. Required of Seniors in Mechanical and Electrical Engineering. Hydrostatics,

hydrokinetics, including the flow of water through orifices, pipes, and open channels. Hydrodynamics, including theory of hydraulic motion and pumps. Hydraulic instruments and measurements. Text-book, Slocum's *Elements of Hydraulics*. Professor MANN.

411. Railroad Engineering. First term, two periods. Required of Seniors in Civil Engineering. Turnouts, spirals, track laying, cross-sections, calculation of earthwork, vertical curves, and general principles of railroad surveying. Text-book, Searles & Ives's *Field Engineering*. Professor TUCKER.

412. Railroad Economics. Second term, two periods. Required of Seniors in Civil Engineering. Economics of railroad location; maintenance of way; recitations and reports on outside reading. Text-book, Crandall & Barnes's *Railroad Construction*. Professor TUCKER.

414. Water Supply. Second term, two periods. Required of Seniors in Civil Engineering. Investigation of water supplies; methods of treatment; a study of the design and construction of filtration and pumping plants; distribution systems; pumping systems; a review of dam constructions; inspection and study of water supply system of the city of Raleigh. Text-book, Folwell's *Water Supply Engineering*. Professor MANN.

413. Mechanics. First term, three periods. Required of Seniors in Civil Engineering. Kinetics, including rectilinear motion, curvilinear motion, rotation, combined oscillation and rotation, work and energy, impulse, momentum and impact, with numerous applications to engineering problems. Text-book, Poorman's *Applied Mechanics*. Professor TUCKER.

416. Astronomy. Second term, two periods. Required of Seniors in Civil Engineering. Study of the celestial sphere and system of coördinates. Special attention is given to those astronomical observations which may be needed in the practice of the surveyor. Observation with engineer's transit for latitude and longitude, time, and azimuths are a required part of the work. Text-book, Hosmer's *Practical Astronomy*. Professor TUCKER.

Architectural Engineering

301. History of Architecture and Ornament. Continuation of the technical and historical study of architecture and ornament of the renaissance and modern styles. Lectures with library research and sketching. Two periods, first term. Required of Juniors in Architecture. Prerequisite, Architecture 201. Associate Professor SHUMAKER.

302. Principles of Architectural Composition. Discussion of the qualities of good architectural composition, as unity, character, scale, proportion, etc. Required of Juniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

303-304. Architectural Design. Continuation of problems in design, composition, and planning. Research and drafting. Required of Juniors in Architecture. Both terms, two periods. Prerequisite, Architecture, 211-212. Associate Professor SHUMAKER.

305. Pen and Pencil Drawing. Work in pen and ink and pencil from casts of architectural subjects, antique sculpture, and ornament. First term, one period. Required of Juniors in Architecture. Associate Professor SHUMAKER.

306. Water Color Painting. Work from models and still life. Conventional and sketch rendering of architectural subjects. Required of Juniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

308. Working Drawings. Details of construction for a building designed in course 311. Required of Juniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

310. Photography. Study and use of cameras. Making pictures from line and wash drawings. Exterior and interior detail. Landscape composition. Lantern slides. Required of Juniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

401. Tall Buildings. Stresses in and design of steel-framed office buildings. Required of Seniors in Architecture. First term, three periods. Associate Professor SHUMAKER.

403-404. Advanced Design. Advanced problems in design, composition and planning. In second term one major problem is studied and worked up in detail. Required of Seniors in Architecture. First term, two periods; second term, four periods. Prerequisite, Architecture, 311-312. Associate Professor SHUMAKER.

405. Clay Modeling. Work from architectural casts and sketches. Required of Seniors in Architecture. First term, one period. Associate Professor SHUMAKER.

406. Professional Practice. Relation of architect to owner and contractor; professional ethics. Laws of business and contract, and other matters of practical value. Required of Seniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

407. Advanced Water Color. Rendering of architectural subjects. Out-of-doors sketching. Required of Seniors in Architecture. First term, one period. Prerequisite, Architecture 322. Associate Professor SHUMAKER.

408. Fire Protection. A study of various methods of fire protection and fire prevention. Required of Seniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

410. Specifications. The study and writing of specifications for different types of construction. Required of Seniors in Architecture. Second term, one period. Associate Professor SHUMAKER.

Highway Engineering

To meet the demand in the State for competent highway engineers, there has been created in the Department of Civil Engineering a new Department of Highway Engineering. The work for the first three years is identical for all students of Civil Engineering, but in the Senior year the student who desires to specialize in Highway Engineering omits certain subjects from the regular Civil Engineering course, and the time thus made available is taken up with special courses in Highway Engineering. The Junior Highway Engineering Courses, 307 and 308, are taken by all regular Civil Engineering students. Senior Highway Surveying (course 405 H), Senior Highway Bridge Design (course 402 H), and the Highway Engineering Laboratory (course 406 H), are taken by those students specializing in Highway Engineering in place of Railroad Engineering (course 411), Railroad Economics (course 412), Railroad Surveying (course 405), Bridge Design (course 402), and Civil Engineering Laboratory (course 406), respectively. These courses are so arranged that the student who specializes in Highway Engineering will, at the same time, receive a well-balanced training along the lines of general Civil Engineering.

Special students who desire to take the Junior and Senior courses in Highway Engineering in one year will be permitted to do so, provided they have had the proper foundation for the work, and provided they have not the time in which to pursue the regular course in Civil Engineering to graduation. Such students must supplement their work in Highway Engineering by taking other suitable Civil Engineering courses.

411H. Highway Engineering. First term, two periods. Required of Seniors specializing in Highway Engineering. Advanced Highway Engineering. Grades, sections, foundations, drainage, surveys, plans, and estimates. A more extended course than Junior Highway Engineering. Text-book: Harger and Bonney's *Highway Engineer's Handbook*. Professor TUCKER.

412H. Highway Economics. Second term, two periods. Required of Seniors specializing in Highway Engineering. The economics of highway location and construction, with particular refer-

ence to methods and costs. Road legislation and the method of financing road building. Highway transportation. Text-book, Blanchard and Drowne, *Highway Engineering*. Professor TUCKER.

402H. Highway Bridge Design. Second term, three periods. Required of all Seniors in Highway Engineering. The complete design of wood, steel, and concrete highway bridges. The loading and specifications are given and the calculations for maximum and minimum stresses made by the student, after which the different members are designed and the drawings completed. Lectures and notes. Professor TUCKER.

405H. Highway Surveying, Field Work. First term, one period. Required of Seniors specializing in Highway Engineering. Reconnaissance, preliminary, and location survey for a section of road. The located line is cross-sectioned, the earthwork computed, and complete plans and estimates are prepared. Professor TUCKER.

406H. Highway Engineering, Laboratory. Second term, one period. Required of Seniors specializing in Highway Engineering. The testing of materials used in road building, including sand, clay, cement, and bituminous materials. Professor TUCKER.

ECONOMICS AND SOCIOLOGY

101. Citizenship. Required of all Freshmen in the College. Two periods, first term. The object of this course is to assist in developing, in all students of the College, an intelligent and sympathetic attitude toward the problems of citizenship. It deals with the practical, social, economic, civic, moral, and ethical problems of the day. It is the purpose of the course to give such an understanding and appreciation of the social structure and social problems of our time as to develop on the part of the students judgment and convictions on the great civic and moral questions of individual and social conduct. Professor TAYLOR.

301-302. General Economics. Required of all Juniors in Agriculture except veterinary students. Three periods, first term. Alternative elective for all other Juniors not taking R. O. T. C. Two periods, both terms. This course is designed to be of equal value to students in all divisions of the College. It treats of the business aspects and economic organization of society. It includes a study of the great fundamental economic laws which apply to all professions and occupations; a study of the production, distribution, and value of economic goods; and a study of the institutions, agencies, and ideas which dominate, operate, and control the manner, means, and methods of making a living. This course is prerequisite to all other courses in economics. Professor TAYLOR.

303-304. General Sociology. Elective for all Juniors in Agriculture except veterinary students. Three periods, second term. Elective for all other Juniors not taking R. O. T. C. Two periods, both terms. This course is an introduction to the scientific study of social life. It deals with the origin, development, structure, and function of all types of social organization. A number of practical social problems such as poverty, crime, race problems, immigration, divorce, etc., are studied. The last half of the course is devoted to a study of social psychology, social institutions, and other forms of human associations; social ideas, social processes, social controls, and social progress. Professor TAYLOR.

401. Agricultural Economics. Required of all Seniors in Agriculture except veterinary students. Three periods, first term. This course is fundamentally the application of the principles of economics to the occupation of farming. It deals with such specific problems as the economic choice of crops and livestock; the economic organization of crops, livestock, equipment, and labor on the farm; the values of land and agricultural products; farm labor and wages, farm credits and finances; farm rents and profits; types of land tenure; and the economic motives and ideals of agriculture. Professor TAYLOR.

403. Rural Sociology. Elective for all Seniors in Agriculture, except students in veterinary medicine. Three periods, first term. This is a course in Rural Social Problems. It deals with the rise and nature of the so-called Rural Social Problems and the general social conditions which maintain in and result from the occupation of farming. Such specific problems as rural isolation and communication, rural health, rural recreation, the rural school, the rural church, and the rural home are taken up and analyzed. In as far as possible, a first-hand study is made of different rural communities and their problems by the instructor and students. Professor TAYLOR.

402. Marketing of Farm Products. Required of Seniors in Farm Crops. Elective for all other Seniors in Agriculture except students in Veterinary Medicine. Three periods, second term. This course treats of that phase of farm business which relates itself to local, central, and world markets. It studies the areas of the world which produce the different types of farm products; the degree of competition which exists between other areas of production and the United States; our present systems of marketing and their results, and forms of cooperative marketing. Each farm product is taken up and studied according to the above scheme in order that a knowledge may be had of the specific marketing problems which confront the producers of these various products. Professor TAYLOR.

405-406. Shop Organization and Management. Elective for all Seniors in Engineering and Textile. Two periods, both terms. This

is a course in Industrial Engineering. It deals with the mechanical and business organization of shops and factories. The course is designed to equip students to handle positions of foremen, superintendents, and other directing positions in industry. It deals with types of shop and factory organizations and managements; the principles of business organization; buying and selling; shop and factory equipment; standardization; scientific management, factory accounts, and other business technologies and methods. Professor TAYLOR.

407-408. Personal Administration and Industrial Problems. Required of all Seniors in Electrical Engineering, and elective for all other Seniors in Engineering and Textile. Two periods, both terms. The purpose of this course is to study the principles and best prevailing practices in the field of the administration of human relations in business and industry. It deals, the first term, with such problems as employment, health and safety, training, personal research, welfare services, and other human problems of industry. During the second term it deals with the psychology of salesmanship and advertising and with present-day labor problems. Professor TAYLOR.

501-502. Seminary. Special Economic and Social Problems. This course is primarily for graduate students who are working on specific thesis problems. Specially chosen Seniors may take the course upon the approval of the head of the department. Professor TAYLOR.

Short Course in Agriculture

22. Rural Economic Organization. Two periods, second term, second year. A study of the principles and practices of economics as applied to farming. The following problems are studied: economic choice of crops, livestock, farm equipment; the economic organization of a farm; cause for present prices of land and agricultural products; farm labor and wages, rural credits and finances, rents and leases, tenantry and ownership of land. Types of rural economic organizations are given special attention.

32. Rural Social Organization. Two periods, second term, second year. A study of all rural social institutions and rural social problems. Such problems as rural government and law, rural education and schools, rural church and religion, rural homes and recreation, etc., are specifically studied.

42. Farm Cost Accounting. Two periods, second term, second year. A complete analysis of farm business by accounting in which simplicity, accuracy, and profits will be emphasized. A study of farm accounting to enable the farmer to find cost of production. Labor

and equipment accounts; depreciation of farm enterprises; business correspondence and forms. Each student will be taught and required to keep a farm business record and a farm diary.

52. Marketing Farm Products. Two periods, second term, second year. A study of the present systems of marketing; new types of cooperative marketing; the function of grading, standardizing, processing, storing, and financing in the market problem. Special attention will be given to the marketing of cotton, tobacco, and peanuts.

Rehabilitation Course in Agriculture

Farm Economics. A course which studies the business side of farming. The economic choice and combination of crops, livestock, labor, and farm equipment; the factors which determine the value of farm lands and prices of agricultural products; the marketing of farm products; cooperative organization and other phases of business organization and knowledge which a farmer needs to use to make farming profitable.

EDUCATION (VOCATIONAL)

301-302. Introduction to Education. The purpose of this course is to bring the student to a realization of the educational needs of society and the individual, and give him some conception of the fundamental principles of scientific educational procedure. The course begins with a study of the aims and values of education and their application to the organization of courses of study and curricula in rural secondary schools. A study is made of the bases for the present tendencies in education—economic, social, and psychological. The practical application of psychological principles and facts in high school agricultural teaching consumes about one-half of the time given to the course. Some of the topics considered in this connection are original nature and its modification, attention, interest, habit, memory, imagination, individual differences, transfer of training, adolescence, and practical methods of study. One laboratory exercise a week provides concrete illustration of the principles studied, and gives the students ability to understand and interpret educational measurements and statistics. Three periods throughout the year. Required of Juniors in Vocational Education. Elective for all other Juniors in Agriculture except veterinary students. Professor Cook.

401. Principles of Teaching. This course deals with the nature of the learning process and its relation to teaching methods; nature of interest, how aroused and sustained; formal and socialized recitation; how to study and methods of supervising study; project teaching; discipline; lesson planning; use of the double period; illustrative material; marking pupils' work; use of the survey in teaching; ques-

tions and questioning; assignment of the lesson; organization and procedure of laboratory and field exercises; value of reviews; purposes and kinds of examinations. Three periods, first term. Required of Seniors in Vocational Education. Professor Cook.

402. Rural School Organization and Administration. Adaptation of the school to the needs of the rural community; the financial and legal status of education in North Carolina compared with a few other states; school consolidation; supervision; educational measurements; curricula; equipment; the teaching staff; the principal and his job; extramural activities; and student extraclass activities. This course is designed to meet the needs of agricultural teachers who at the same time act as principals in the small rural high schools. Three periods, second term. Required of Seniors in Vocational Education. Assistant Professor .....

403-404. Methods of Teaching Agriculture, Observation and Practice Teaching. This course aims to give the specific helps needed by a teacher of agriculture. The selection and use of the materials and devices, such as classroom and laboratory fixtures and apparatus, illustrative materials, and methods of cataloging bulletins and other material are considered. Emphasis is put on the selection and organization of subject-matter, and the various methods employed in teaching agriculture, laboratory methods, the use of the field and farm in instruction, supervised study, planning and supervising home projects, and community activities. Some systematic work is done in schoolroom observation. Provision is made for the students to do practice teaching in near-by agricultural schools. As far as possible, the work of this course will correlate with the work in Principles of Teaching. Three periods throughout the year. Required of Seniors in Vocational Education. Professor Cook, Mr. Coggin.

501-502. Problems in Teaching. A teacher in service may pursue a graduate course in special problems in teaching in absentia. This course will deal specifically with his problems as a teacher, the nature and content of the course to be determined by the needs of each individual. Considerable of this work will be carried on by correspondence, but frequent visits will be made by members of the department for consultation and checking up on the work. Reports will be required periodically. Credit, 1 to 3 hours a term. For graduates. Professor Cook.

405-406. Seminar. This course will consist of reports and discussions of current educational affairs, including experimental work in education, new movements, and some of the important educational problems. One period, both terms. Elective for Seniors and graduate students in Vocational Education. Professor Cook and members of the staff.

ELECTRICAL ENGINEERING

102. Electrical Engineering Lectures. A course introducing the student to general engineering methods, with more stress laid on electrical problems. The student is made familiar with general engineering terms and principles and the materials used in engineering work, and is given a general review of the field of Electrical Engineering. One period, second term. Required of Freshmen in Electrical Engineering. Professor BROWNE, Mr. COX.

201. Electrical Practice. Exercises in wiring for bells and annunciators, simple telephone wiring, house wiring, care, operation, and repair of electrical machinery, practical methods of measuring and testing to locate faults, installation of electrical machinery. This course is planned to make the student familiar with the ordinary care and maintenance of electrical apparatus. Two periods, first term. Required of Sophomores in Electrical Engineering. Mr. Cox.

301-302. Elements of Electrical Engineering. A thorough study is made of the production and utilization of electric currents, beginning with the theory of the magnetic circuit, the electric circuit, electromagnetic induction, electrical measurements, construction of dynamos and motors, operation and care of electrical machinery. Three periods, both terms. Required of Juniors in Electrical Engineering and Seniors in Textile Engineering. Prerequisites, Physics 201-202. Professor BROWNE, Associate Professor MCINTYRE.

303-304. Electrical Engineering. An introductory course for students in other engineering departments, consisting of the study of the apparatus used in the production, distribution, and utilization of electrical power. Required of Juniors in Mechanical Engineering and Seniors (1921-22 only) in Mechanical Engineering. Two periods, both terms. Prerequisites, Physics 201-202. Associate Professor MCINTYRE.

305-306. Electrical Engineering Laboratory. This study accompanies subjects 301-302. It includes use of standard apparatus, calibration of instruments, electric and magnetic measurements, the operation and testing of generators and motors. Two periods, both terms. Fee, $2. Required of Juniors in Electrical Engineering and Seniors in Textile Engineering. Prerequisites, Physics 201-202 and Physics 203-204. Associate Professor MCINTYRE, Mr. Cox, Mr. .....

307-308. Electrical Engineering Laboratory. A course to accompany Subjects 303-304. Instruction is given in the care and operation of direct and alternating current machinery. One period, both terms. Fee, $1. Prerequisites, Physics 201-202 and Physics 203-204. Mr. Cox, Mr. .....

309-310. Electric Motors. The elementary laws of electric currents, principles, construction, operation, and care of electrical machinery, electric lamps and illumination. A study of the use of electrical machinery in factories, with special reference to textile mills. Two periods, both terms. Required of Juniors in Textile Manufacturing. Mr. Cox.

401-402. Alternating Currents and Machinery. A study of the flow of periodic currents in circuits containing resistance, inductance, and capacity; the construction, operation, and performance of alternating current machinery. Three periods. Both terms. Required of Seniors in Electrical Engineering. Prerequisites, Subjects 301-302. Professor Browne.

403. Industrial Applications of Electrochemistry. Primary batteries, types and methods of testing; storage batteries, manufacture, testing, care and maintenance, uses and methods of control; electrochemical methods in the production and purification of materials and refining of metals; the electric furnace for the production and refining of metals and other materials; various electrochemical processes Includes a brief discussion of electrochemical theories. Three periods, first term. Required of Seniors in Electrical Engineering. Associate Professor McIntyre.

404. Electrical Communication. A study of the systems employed in the transmission of intelligence by means of electrical methods. Wire telegraph systems. Rapid telegraphy. Multiplex telegraphy. Radio telegraphy. Theory and practice of telephony. Manual and automatic telephone systems. Telephone transmission over lines and cables. Radio telephony. Railway signaling systems. Miscellaneous systems of communication. Three periods, second term. Required of Seniors in Electrical Engineering. Associate Professor McIntyre, Mr. Cox.

405-406. Electrical Transmission and Distribution for Lighting and Power. A study of low-potential systems of distribution, lighting systems, electric lines, interior illumination, street lighting, electric drive in mill and factory, electric traction, hydroelectric development, high-tension transmission, calculation of high-tension lines. Three periods, first term; two periods, second term. Required of Seniors in Electrical Engineering. Prerequisites 301, 303, 305, 306.

407-408. General Electrical Engineering Laboratory. This study is taken up simultaneously with the study of alternating currents. It includes practice with alternating currents, measurements of inductance and capacity, experimental study of transformers, alternating current generators and motors, advanced methods of testing electrical apparatus, and shop testing. Three periods, both terms.

Fee, $3. Required of Seniors in Electrical Engineering. Prerequisites, Subjects 301-302 and 305-306. Associate Professor McIntyre, Mr. Cox, Mr. .....

409-410. Design and Calculation. A course in which electrical problems of all kinds are studied. This includes the calculation of circuits, the performance of machines, the design of simple electrical apparatus, transmission lines, problems of control of electrical apparatus, and in lighting and illumination. One period, both terms. Required of Seniors in Electrical Engineering. Prerequisites, 301-302. Professor Browne and Associate Professor McIntyre.

ENGLISH

For use in English throughout the College course every student needs a fountain pen, a loose-leaf notebook for sheets eight by eleven inches, with rings six inches apart, and a dictionary as large at least as the Desk Standard or Webster's Collegiate Dictionary. Those who have or can afford typewriters are advised to use them.

101-102. Composition and Rhetoric. Special attention is given the mechanics of writing, the construction of paragraphs, and the planning of oral and written reports of moderate length on scientific or current topics. Frequent themes and short oral reports are required, many of them involving the use of reference books in the College library. Required of Freshmen and of Second-year Short Course Mechanical, Agricultural and Textile Manufacturing students. Three periods throughout the year. Assistant Professor Wilson, Mr. Keeble, Mr. Baker, Mr. Kennedy.

201-202. (1) American Literature. The work consists mainly of the reading and analysis of American works in prose and verse. The students are required to make frequent written and oral reports on their class and parallel reading. Three periods, first term, and second term to March 1. Required of Sophomores. Associate Professor Summey, Assistant Professor Wilson, Mr. Keeble.

(2) Public Speaking. The technique of public speaking is taught in text-book and lectures, with analysis of published speeches and with frequent exercises in the composition and delivery of short arguments and orations. Some attention is given to parliamentary procedure and decorum. Three periods after March 1. Required of Sophomores. Associate Professor Summey, Mr. Wilson, Mr. Keeble.

301. English Literature. A rapid review of the history of the literature is followed by the intensive study of carefully chosen poetry and prose. The purpose of the course is to furnish a background and to cultivate a discriminative taste for reading. Three periods, first

term. Required of all Juniors except those in Agriculture and Textile Engineering. Professor HARRISON, Associate Professor SUMMEY.

302. Technical Writing. The principles of composition, as applied in engineering reports, formal theses, and monographs are presented in a text-book and practiced in several papers and exercises. One thesis is written by each student. Three periods, second term. Required of all Juniors except those in Agriculture and Textile Engineering. Professor HARRISON, Associate Professor SUMMEY.

303. Agricultural Journalism and Correspondence I. The work of the fall term will begin with a rapid review of the essentials of writing, with special attention to grouping in sentence and paragraph, emphasis and subordination, clear and informal transition, straightforward progress of composition, and the technique of clarifying and lightening style. After this preliminary study, attention will be directed to the planning, the composition, and the mechanics of business letters, sales letters and circulars, agricultural advertisements, and extension letters. Three periods, first term. Elective for all Agricultural Juniors except Veterinary students. Prerequisite, English 201-202. Professor HARRISON.

304. Agricultural Journalism and Correspondence II. The work of the spring term will be so arranged that it may be taken independently of course 303 above. Course 304 will include the preparation of agricultural news stories, publicity articles, popular articles, editorials, technical articles, theses, and bulletins. Instruction will be incidentally given in punctuation, capitalization, the use of italic and boldface, captions, tabulation, the use of cuts and figures, and other matters of typography and makeup. Three periods, second term. Elective for all Agricultural Juniors except Veterinary students. Prerequisite, English 201-202. Professor HARRISON.

401. Classics. The lives and works of the great scientists and of other great writers, particularly of the nineteenth century, are studied in this course. Essays will form an important part of the work. Prerequisite, 301-302. Three periods, first term. Open to Seniors. Professor HARRISON.

402. Journals. To give practical knowledge of technical and of other standard journals is the purpose of this course. The essays required are mainly of scientific and technical character. Prerequisite, 301-302 and 401. Three periods, second term. Open to Seniors. Professor HARRISON.

11-12. Short Course. This is a thoroughly practical course in the elements of grammar and in composition, especially spelling, sentence and paragraph structure, and letter writing. Some reading

is done in class, and supplementary reading is assigned for private study. Three hours a week. Required of first-year Short Course students. Mr. Baker, Mr. Kennedy.

FARM CROPS AND FARM MANAGEMENT

Four-Year Courses

102. General Farm Crops. A course covering the essentials of the leading cereals, legumes, and grasses in North Carolina, with special reference to their adaptation, culture, improvement, harvesting, and use. Practice in the study of growing and dried crops in the field and laboratory, including the selection and germination of seed corn and small grains, the identification of important legumes and grasses, including their seeds. Prerequisite, Botany 101. Three periods, second term. Required of Freshmen. Professor Darst.

301. Cereal Crops. Lectures and recitations on the history, production, cultivation, improvement, harvesting, storage, and marketing of corn, wheat, oats, rye, barley, etc. Practice in selecting, judging, and testing of corn and small grains. A study of the growing and dried crops and their products in the field and laboratory. Prerequisite, Botany 101 and 102. First term, three periods. Required of Juniors in Farm Crops and Veterinary Medicine. Elective for other Juniors in Agriculture. Professor Darst.

302. Legumes and Grasses. Lectures and recitations on the history, adaptation, use, production, cultivation, and marketing of legumes and grasses. Practice in the study and identification of forage plants and their seeds, using growing and dried specimens in the field and laboratory. Prerequisite, Botany 101 and 102. Three periods, second term. Required of Juniors in Farm Crops, General Agriculture, and Animal Husbandry. Elective for other Juniors. Professor Darst.

304. Advanced Farm Crops. Lectures and assignments on agricultural experimental methods; variety, description, and identification; advanced grain judging, and the study of the Federal Grain Standards Act. Practice consists of the study and laying out of experimental plats, the identification of crop varieties; grain judging, and practice in determining market grades of grain. Prerequisite, Farm Crops 302 and 301. Three periods, second term. Required of Juniors in Farm Crops. Professor Darst.

303. Farm Cost Accounting. The use of farm inventories, single enterprise accounts, complete farm accounts, and other farm records. Special emphasis is given to interpretation of results and their application in the organization and management of the farm.

Three periods, first term. Required of Juniors in Farm Crops, General Agriculture, and Vocational Education. Elective for other Juniors. Mr. D. B. Wilson.

403. Cotton and Tobacco. History, distribution, and uses of cotton. A study of the types and varieties of cotton, the soil and climatic requirements, soil preparation, fertilization, cultivation, harvesting, classing, and marketing. The study of tobacco includes the history, distribution, types and varieties, seed selection, plant beds, soil preparation and fertilization, cultivation, topping, suckering, harvesting, curing, and marketing. Practice consists of the study of varieties, lint and market grades of cotton. Considerable practice will be given in the sampling and classing of cotton. A study of varieties, quality, and market requirements of tobacco. Three periods, first term. Required of Seniors in General Agriculture and Farm Crops; elective for other Seniors except those in Veterinary Medicine and Agricultural Chemistry. Professor Darst.

405-406. Crop Improvement. A study of the varieties of farm crops; their variation and improvement. The principles and practice of breeding as applied to the improvement of farm crops. Practice in methods of selection and hybridization, including field tests of corn. cotton, wheat, oats, tobacco, soybeans, cowpeas, velvet beans, etc. A portion of the College farm is utilized for the exclusive use of men taking this course. Prerequisite, Farm Crops 302 and 301. Three periods, both terms. Required of Seniors in Farm Crops. Professor Darst.

402. Farm Management. Lectures and recitations on farming as a business; types of farming, balance of business, size of business, rates of production, farm layout, building arrangement, labor management, machinery, marketing, ways of starting farming, farms of tenure and leases, choosing and buying a farm, use of capital and credit, planning, organization and management of specific farms. Prerequisites, Economics 301-302 and Farm Management 303. Three periods, second term. Required of all Seniors in Agriculture except those in Veterinary Medicine and Agricultural Chemistry. Mr. D. B. Wilson.

404. Types of Farming in United States. A study of the types and methods of farming best adapted to different sections of North Carolina and the United States, and of the natural and economic conditions that make these types best. Accompanied or preceded by Farm Management 402. Two periods, second term. Elective for all Seniors in Agriculture except Veterinary students. Mr. D. B. Wilson.

501-502. Graduate Courses. The following courses are offered: (*a*) Corn, small grain; (*b*) cotton, tobacco; (*c*) pastures, meadows, hay and forage; (*d*) legumes, green manuring and cover crops; (*e*) rotations, weeds; (*f*) crop breeding, seed production; (*g*) field crop experiments. Four periods. Professor DARST.

FARM CROPS

Two-Year Short Courses

11. Corn and the Small Grains. The classification, adaptation, culture, harvesting, marketing, and uses of corn and the small grains. Some of the phases of the culture of these crops included in the course are soil and regional adaptation, preparation of the soil, fertilization, seeding, harvesting; varieties, seed selection and improvement; and rotations. Three periods, first term, first year. Professor DARST.

12. Legumes: Clovers, Soybeans, Cowpeas, Velvet Beans, and Peanuts; Cotton. Cultural practices from soil preparation to harvest; inoculation; varieties, their adaptation and improvement; uses for seed and forage. Special prominence is given to the place of these crops in the rotation, and their relation to permanent soil fertility. Three periods, second term, first year. Professor DARST.

22. Farm Management. Discussions on the qualifications of farmers; choosing a farm; the advantages and disadvantages of different types of farms and some of the factors determining types; farm organization, the amount and kinds of equipment, the arrangements of fields, buildings, fences, roadways, etc.; farm labor, tenantry, cropping and feeding systems. Practice will be given in planning cropping systems, laying out farms, and solving farm problems. Three periods, second term, second year. Mr. D. B. WILSON.

Winter Course

Crops Accessory to Staple Crops for Use on the Farm. (*a*) For the improvement of the soil; (*b*) for distribution of labor.

There is a large number of crops adapted to the soil and climate of North Carolina that deserve more attention than has been given them. These minor crops may be grown profitably in association with the crops now employed as staple crops, and with a minimum increase in equipment and labor. The appropriate selection and adjustment of these crops to established systems of farming is one of the surest means by which farming in 1921 may be made more profitable. This course covers the selection of crops for the different sections of the State, their culture and uses, and their adjustment to present farm plans.

How to Grow, Cure and Preserve Hay and Forage. Cheaply produced, home-grown animal food is one of the very serious farm prob-

lems of the day. While North Carolina is exceptionally well adapted to the production of such crops, the farmers of the State have not, as a rule, given this phase of their business the attention it deserves. This course will be devoted exclusively to the many crops that may be profitably grown for hay and forage and to the comparative advantage of these different crops not only as feeds, but as crops that will fit in and strengthen the different farming systems of the State. The prime object of the course will be to show how an abundance of high quality hay and forage may be cheaply produced. Professor Darst and Mr. D. B. Wilson.

Farm Crops for Rehabilitation Men—Two-Year Course

Preparatory courses or their equivalent will be required of men entering the two-year course.

First Year

R-11. Cereal Crops. A study of the production of grain crops. This course considers the culture of corn, wheat, oats, rye, and barley. Emphasis is placed on economical production and factors that affect the yield of grain crops. Practice in growing, selection, and judging is required. Fall term. Mr. Cotner.

R-12. Forage Crops. A study of grasses and legumes as to adaptation and identification; culture and uses of hay, pasture, soiling, and green manuring crops. Practice in growing and identifying is required. Spring term. Mr. Cotner.

R-13. Crop Improvement. This course deals with the improvement of important farm crops that are grown on the College farm; as to best varieties, best methods of cultivation, selection, and storage. Summer term. Mr. Cotner.

Second Year

R-21. Cotton and Tobacco. History, distribution, uses, types, and varieties, adaptation, harvesting, grading, and marketing. Considerable practice will be given in the sampling and grading of cotton. Fall term. Mr. Cotner.

R-22. Crop Improvement. A study of varieties of farm crops Study of the properties of building materials, strength and durability. and the principles and practices of improvement. A portion of the College farm is utilized in the practice of this work. Spring term. Mr. Cotner.

R-23. Farm Management. Methods and practices in keeping farm accounts. Organization and management of the farm as a business. Summer term. Mr. Cotner.

FARM PRACTICES

401. Farm Practices. This course has been designed for agricultural students with the idea of familiarizing and discussing with them briefly some of the opportunities in different types of farming in the State, and to give them some idea of the best farm practices to be followed by North Carolina farmers. The course will be based upon carefully conducted investigations and observations made under North Carolina conditions. Such matters as methods to use for most economic production and for the proper use of farming lands will be taken up. The course will consist of lectures, reference work, assigned topics, and discussions. One period, first term. Required of all Seniors in Agriculture except students in Veterinary Medicine and Agricultural Chemistry. Dean WILLIAMS.

HORTICULTURE

Four-Year Courses

201. Plant Propagation. Principles and methods of propagating plants, and nursery practice. Three periods, first term. Fee, $1. Required of Sophomores. Mr. WHITEMAN.

301. Pomology. The commercial production of the tree and vine fruits. Subjects treated are those in connection with the establishment and management of orchard areas, and the picking, grading, packing, and storing of fruit. Three periods, first term. Required of Juniors in Horticulture. Mr. WHITEMAN.

302. Pruning and Spraying. A continuation of Horticulture 301, in which special attention is paid to principles and methods of training fruit trees and vines, and approved practices employed in protecting them from insect pests and diseases. Methods of protection from frost are also considered. Prerequisite, Horticulture 301. Fee, $1. Three periods, second term. Required of Juniors in Horticulture. Mr. WHITEMAN.

303. Farm Forestry. Principles and practices of forestry as applied to the farm woodlot. Practice work includes observations of woodland areas, and actual work of mensuration of a sample acre, together with formation of plans for its maintenance and improvement. Three periods, first term. Required of Juniors in Horticulture. Elective for other Juniors in Agriculture. Professor PILLSBURY.

304. Vegetable Gardening. The principles of vegetable crop production. The home garden and the trucking industry receive special consideration. Practice work is almost wholly carried on in the greenhouse, the hotbed, and coldframe yard, and among the student gardens which the students are required to plan, plant, and

maintain throughout the duration of the course. Three periods, second term. Required of Juniors in Horticulture and General Agriculture. Elective for other Juniors. Fee, $1. Mr. WHITEMAN.

305. Fruit Growing. Fruit production for the general farm. Emphasis will be placed upon the problems of establishing the farm orchard, vineyard, and small fruit plot, of management with respect to tillage, cover crops, fertilization, pruning and spraying. Grading and packing fruit will also be included. Three periods, first term. Elective for all Juniors in Agriculture. Fee, $1. Mr. WHITEMAN.

401. Vegetable Forcing. Consists principally in the growing of vegetable crops under glass, but also includes study of glass-house construction and general management. Prerequisite, Horticulture 304. Three periods, first term. Required of Seniors in Horticulture. Mr. WHITEMAN.

402. Landscape Gardening. A study of the principles of the arts of design and their application in the improvement of the farmstead, the rural school grounds, and other similar problems. Civic art as adapted to rural improvement is also treated. Practice in surveying, mapping, designing, and as much of execution of important parts of plans as is practicable is required. Three periods, second term. Required of Seniors in Horticulture. Elective for all other Seniors in Agriculture. Professor PILLSBURY.

403. Systematic Pomology. A course which combines both study and practice in the description, identification, classification, and judging of fruits. Prerequisite, Horticulture 301-2. Three periods, first term. Required of Seniors in Horticulture. Professor PILLSBURY.

404. Horticultural Seminar. Here the student is allowed to elect and to pursue the study of some special problem in Horticulture. Three periods, second term. Required of Seniors in Horticulture. Professor PILLSBURY.

405. Plant Breeding. A course of study of the principles of genetics as applied to plants. Practice work includes collection of variations, measurement, and study of variability of farm and horticultural crops, technique of cross-pollination, planning of a breeding plat. Biometrical problems constitute an important part of the course. Three periods, first term. Elective for Seniors in Agriculture. Professor PILLSBURY.

406. Small Fruits. A study of commercial-scale production of the strawberry, the dewberry, and other small fruits. Prerequisite, Horticulture 301-2. Three periods, second term. Elective for Seniors in Agriculture. Mr. WHITEMAN.

Rehabilitation Courses

22. Plant Culture. An elementary course in the methods and practices employed in multiplying plants. Third grade. Second term; recitation, 2 hours; practice, 3 hours a week. Mr. YOUNG.

32. Vegetable Growing. Vocational course in vegetable gardening. Practice includes construction and management of frames and hotbeds, seed sowing, transplanting, planning, planting, and management of gardens. Second grade, second term; recitation, 2 hours; practice, 3 hours a week. Mr. YOUNG.

33. Vegetable Growing. A continuation of Horticulture 32 for men of the Horticultural section. Additional work in spraying, succession planting, rotations, and harvesting included. Second grade, third term; recitation, 2 hours; practice, 3 hours a week. Mr. YOUNG.

41. Fruit Growing. A vocational course in the practical methods of propagating fruit plants, the establishment and maintenance of orchards, and the grading and packing of the products. First grade, first term; recitation, 2 hours; practice, 3 hours a week. Mr. YOUNG.

42. Pruning and Spraying. A vocational course in methods and practices of training and protecting fruit plants. First grade, second term; recitation, 2 hours; practice, 3 hours a week. Nominal fee, to defray partial cost of pruning shears given each man, $1. Mr. YOUNG.

Two-Year Courses

12. Vegetable Growing. Vegetable gardening for the farm, including frame and hotbed making and management, growing early vegetable plants, transplanting, potting, setting out, and cultivation. Each student is required to plan, plant, and care for a garden plat. Three periods, first year, second term. Mr. YOUNG.

21. Fruit Growing. Treats of the growing of fruit on the farm. Practice in selection of sites and soils, choice of varieties, planning and laying out orchards, handling and planting trees, intercropping and fertilization of orchards, and in the grading and packing of fruit is required. Three periods, second year, first term. Mr. YOUNG.

22. Pruning and Spraying. A course which consists largely in practice in spraying and training fruit plants of all kinds. Fee of $1 charged in order to defray partial cost of pruning shears given each student. Three periods, second year, second term. Mr. YOUNG.

Three-Weeks Course

Fruit Growing. A course in which the problems involved in the establishment and management of orchards in North Carolina

will be dealt with from the practical standpoint. Practice will consist of work in the propagation, pruning, and spraying of fruit plants.

Vegetable Gardening. In this course particular emphasis will be laid upon the "all-the-year-round" garden. Seeding, cultural, and harvesting problems in connection with the most important crops will be discussed as fully as possible. Practice will consist of work in garden planning and in the raising of seedlings in the greenhouse and frame, transplanting, and the management of growing crops.

MATHEMATICS

While the subject of mathematics is presented in such a manner that the student obtains a thorough working knowledge of those principles which he needs in his Engineering Course, yet it is not the purpose to subordinate the general theory of mathematics to the practical side. The work consists of recitations, written exercises, and lectures, with frequent oral and written quizzes.

11. Algebra. Wells's *New Higher Albegra.* A thorough treatment of elementary Algebra, beginning with fractions and embracing simple equations, simultaneous equations in two or more unknowns, problem solving, involution, evolution, theory of exponents, and radicals. Required of first-year students in the two-year Engineering courses. First term, five periods. Mr Williams, Mr. Wooten.

12. Plane Geometry. Wentworth and Smith's *Plane and Solid Geometry.* A complete course in plane geometry, including numerous original exercises. Required of first-year students in the two-year Engineering courses. Five periods, second term. Mr. Williams, Mr. Wooten.

101(a). Algebra. Wells's *New Higher Algebra.* This course begins with quadratic equations and completes logarithms, embracing ratio and proportion, variation, the progressions, and binomial theorem. Three periods, first term. Required of Agricultural Freshmen. Prerequisite, entrance requirements. Mr. Fisher, Mr. Williams.

101(b). Algebra. Wells's *New Higher Algebra.* This course begins with quadratic equations and completes summation of series, embracing ratio and proportion, variation, the progressions, the binomial theorem, undetermined coefficients, logarithms, compound interest and annuities, permutations, combinations, and continued fractions. Five periods, first term. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanical Arts students. Prerequisite, entrance requirements. Professor Yates, Assistant Professor Mock, Mr. Fisher, Mr. Williams, Mr. Wooten.

102. Advanced Algebra. Wells's *New Higher Algebra.* The general theory of equations, the solution of higher equations, determi-

nants, etc. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanic Arts students. One period, second term. Prerequisite, 101. Professor YATES, Assistant Professor MOCK, Mr. FISHER, Mr. WILLIAMS.

104. Solid Geometry. Wentworth and Smith's *Plane and Solid Geometry.* This course begins with and completes Solid Geometry including numerous original exercises. Four periods, second term. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanic Arts students. Prerequisite, 101. Professor YATES, Assistant Professor MOCK, Mr. FISHER, Mr. WILLIAMS, Mr. WOOTEN.

201. Trigonometry. Wentworth and Smith's *Plane and Spherical Trigonometry.* Plane Trigonometry. Definitions of the trigonometric functions; derivation of formulae, with their application. Solution of plane triangles, etc. Spherical Trigonometry. Solution of spherical triangles. This course includes the solution of many practical problems. Required of Sophomores in Engineering, Chemical, and Textile Courses. Five periods, first term. Prerequisites, 101 and 104. Professor YATES, Associate Professor HARRELSON, Assistant Professor MOCK, Mr. FISHER, Mr. WILLIAMS.

202. Analytical Geometry. Nichols's *Analytic Geometry.* Loci of equations, straight line, circle, parabola, ellipse, hyperbola, a discussion of the general equation of the second degree, higher plane curves, and geometry of three dimensions. Required of Sophomores in Engineering and Chemical Courses. Five periods, second term. Prerequisite, 201. Professor YATES, Associate Professor HARRELSON, Assistant Professor MOCK, Mr. FISHER, Mr. WILLIAMS.

301-302. Differential and Integral Calculus. Osborne's *Differential and Integral Calculus.* A thorough treatment of the fundamental principles and derivations of formulae; applications to various problems, such as expansion into series, evaluation of indeterminate forms, maxima and minima, radius and curvature, lengths of curves, areas, volumes, etc. Four periods, first and second terms. Required of Juniors in Engineering. Elective for Seniors in Chemistry. Prerequisites for differential calculus, 202; for integral calculus, differential calculus. Professor YATES, Associate Professor HARRELSON, Assistant Professor MOCK.

31-32. Farm Mathematics. In teaching this course, problems for solution will be of the nature of those coming up daily on the average farm, such as calculating the plant food contained in and removed by different crops when fed and when sold directly from the farm; fertilizer formulas for different crops using different classes of materials; rations with different kinds of feed and for different kinds of animals, engaged in different kinds of work; capacity of

different size bins for different kinds of grain; bills of material for different classes of farm buildings; speed of pulleys; draft of farm implements of different kinds; size of drainage tile for different conditions; capacity of cisterns and silos; quantity of different material needed for preserving different kinds and amounts of meats; measure of hay in the barn or stack; amounts of concrete, sand, and gravel needed to construct walls or floors of different kinds; number of feet of lumber woodlands of different kinds will yield; and thousands of other practical farm problems the thoughtful farmer has to work out. Three periods, first and second terms. Required of first-year students in the two-year Practical Agriculture course. Associate Professor HARRELSON, Mr. FISHER, Mr. LEROY.

MECHANICAL ENGINEERING

Four-Year Course

Freshman Year

102. Engineering Lectures. A series of lectures intended to acquaint students with general engineering terms and principles; also with materials used in engineering work, such as lumber, iron, steel, copper, brass, cement, coal, and other materials. Lantern slides are used wherever possible. One period, second term. Required of Freshmen in Mechanical Engineering and Chemistry. Professor VAUGHAN and assistants.

103. Mechanical Drawing. Instruction is given in the drawing of objects, such as models and simple machine parts. The mechanical sketches are made on cross-section paper and to scale without the use of instruments, the work being done with pencils and scale. The method of and reason for representing an object by the three views is taught, as well as the practice in training the hand and the eye to represent form and proportion. All drawings are made in orthographic projection, dimensioned and lettered. Emphasis is placed on free-hand lettering. One period, first term. Required of Freshmen in all Engineering and Textile courses. Mr. MARTIN and Mr. THROWER.

104. Mechanical Drawing. The work in this course includes instruction in the care of instruments as well as how to properly use them in the making of drawings of models and simple machine parts. Instruction in this course also covers tracing and blueprinting. Two periods, second term. Required of Freshmen in Chemistry and in Mechanical, Electrical, Civil, and Textile Engineering. Mr. MARTIN and Mr. THROWER.

NOTE. Each student will be required to furnish at his own expense the following outfit: Text-book, drawing board 23 by 31 inches, 30-

inch T-square, 9-inch 30°-60° triangle, 7-inch 45° triangle, 12-inch triangular scale, 4H pencil, H or F pencil, erasers for pencil and ink, penholder with points, pencil sharpener; instrument set, consisting of 6-inch compass with pen, pencil and lengthening bar, 5½-inch dividers with hair spring adjustment, 3-inch bow dividers, 3-inch bow pencil, 3-inch bow pen, 5½-inch ruling pen. This outfit, of proper quality, will cost about $25. To insure uniform grade of instruments and supplies, the department keeps for sale all of the above at practically cost. This does not mean that they may not be purchased elsewhere, but in case they are they must be approved by the Department.

105. Wood Shop Work. Instruction is given in elementary bench work involving the use of the common hand tools, such as saws, planes, squares, chisels, etc. All exercises are made from blue-prints or sketches, and accuracy is given a prominent place in the requirements. Lectures, demonstrations, and individual instruction are all employed in teaching this subject. Due regard is given to the initiative of the student. Lectures are given upon the history and traditions of tools and wood-working industries, tying the course up with the specific needs of the engineer. One period, first term. Required of Freshmen in Chemistry and in Mechanical, Electrical, and Civil Engineering. Mr. Busby.

106. Wood Shop Work. The second term continues the principles outlined in the first term as applied to lathes and wood-working machinery. In wood turning, problems are assigned involving the use of all of the turner's tools. Work between centers, face plate and chuck work, polishing and finishing are all done on the lathes. Opportunity is given for working out designs or inventions related to the work. In the instruction on wood-working machinery all of the common wood-working machines such as band, jig, and circular saws, surfacers, jointers, shapers, mortisers, molders, and sanders are used. The care as well as the use of the machines is taught. Quantity production and cost-finding systems are used when possible. Furniture and equipment for the various departments of the College are given special attention in the shop. Prerequisite, Mechanical Engineering 105. One period, second term. Required of Freshmen in Chemistry and in Mechanical, Electrical, and Civil Engineering. Mr. Busby.

Sophomore Year

201-202. Descriptive Geometry. The first term is taken up with instruction in representing on a flat surface geometrical magnitudes, points, lines, surfaces and solids, and the solution of problems relating to them. A practice period follows each hour of instruction. In

the second term the work will be the application of the principles of Descriptive Geometry to the actual design of pieces of machinery. Prerequisites, Mechanical Engineering 103-104. One period, first term; two periods, second term. Required of Sophomores in Mechanical and Electrical Engineering. Assistant Professor CLOYD.

203. Foundry Work. Recitations and exercises in foundry work, including selection and working condition of sand; use and care of tools and machines; floor, bench, machine molding, and core making; mixing cast iron and alloys; management of cupola and brass furnace in iron and brass melting; making castings for special machines, general repairs and machine shop work; relation and merits of a variety of tools and materials used in foundry practice. One period, first term. Required of Sophomores in Mechanical Engineering. Mr. WORTH.

205. Pattern Making. A study of pattern making in its relation to molding; the practical construction of patterns to prevent warping and twisting; the making of special patterns; also patterns for different machines, such as drill presses, lathes, jointers, etc.; cores and core boxes; introducing draft, shrinkage, finish, and the appliances and usage of modern pattern work. The relation between pattern making and foundry practice is emphasized, and all problems are solved with this in view. Required of Sophomores in Mechanical Engineering. One period, first term. Prerequisite, Woodwork 121-122. Mr. WORTH.

206. Forge Shop Work. This course includes instruction on the treatment of iron and steel, the use of punches, swages, fullers and set-hammers, and hand tools. Exercises in drawing, upsetting, forming; scarf, jump, butt, and cleft welding; making of forge and machine shop tools from blue-prints; hardening and tempering, annealing, carbonizing, and case hardening; selection of tool steels. Special work on equipment and repairs about the College shops and laboratories. One period, second term. Required of Sophomores in Electrical and Mechanical Engineering. Mr. PARK.

208. Mechanical Drawing. This course is a continuation of the work done in Mechanical Engineering 104. Freehand sketches are made of models and actual parts of machines. From these sketches complete working drawings are made without further reference to the original model. Toward the end of the term the design of elementary cams and other elementary mechanism is given. One period, second term. Required of Sophomores in Textile Manufacturing. Prerequisite, Mechanical Engineering 103-104. Assistant Professor CLOYD.

Junior Year

301-302. Heat Engines. Nature and measurement of the units of heat, work, and power as used in steam engineering. A study of the properties of steam; use of the "Steam Tables" for solving problems; the theory of steam calorimeters, mechanical mixtures, and combustion of fuels; the application of the above to boilers for the purpose of determining rating, capacity, and efficiency; the functions of the various boiler auxiliaries; elementary thermodynamics as applied to the steam and gas engine cycles; valves, valve gears, and governors of steam engines; determination of indicated and brake horse-power and efficiency of engines for given conditions. Steam turbines and gas engines are studied briefly. Three periods, both terms. Required of Juniors in Mechanical, Electrical and Textile Engineering. Prerequisite, Physics 201 and 202. Professor VAUGHAN and Associate Professor DANA.

303-304. Mechanism. An analysis of motions and forms of machines. Among the subjects discussed are instantaneous centers, kinematic chains, velocity diagrams, parallel and straight line motions, cams, gearing, worms and worm wheels, belting and intermittent motions. The solution of a large number of practical problems by both graphical and mathematical methods is required. A study of materials used in machine construction; analysis of stresses in machine parts; design of machine parts, considering them as compression, tension, or torsion members; modification of the above to suit practice and for the sake of general appearance. Design of simple machines, such as shears, punches, power pumps, etc., all calculations to be made in standard form and handed in with the assigned problems. Two periods, both terms. Required of Juniors in Mechanical Engineering. Elective for Seniors in Electrical Engineering. Prerequisite, Mechanical Engineering 202. Assistant Professor FOSTER.

305-306. Machine Shop Work. Instruction in this course covers bench work, exercises in chipping and filing, as well as exercises in lathe work, boring, reaming, drilling, planing, milling, and shaping. One period, both terms. Prerequisite, Mechanical Engineering 203 and Mechanical Engineering 206. Required of Juniors in Mechanical Engineering. Elective for Seniors in Electrical Engineering. Mr. PARK.

307-308. Mechanical Engineering Laboratory. The work consists largely of calibrating and becoming familiar with the various instruments used in engineering testing. Practice in the use of calorimeters, both steam and fuel, and the operation of apparatus used in determining the products of combustion in a furnace. Determin-

ing the relation between pressure and temperature of steam; the flow of steam through orifices, etc. Practice in the use of indicators and planimeters for the purpose of determining the indicated horsepower of steam and gas engines. The operation of injectors and pumps for the purpose of determining their duty. Testing of lubricants for flash, burning, chill point, and viscosity. Study and operation of lubricators and lubricating systems. One period, both terms. Required of Juniors in Mechanical, Electrical, and Textile Engineering. Prerequisites, Physics 201-202 and 203-204. Associate Professor DANA.

309. Applied Mechanics. Prerequisites, Analytical Geometry and Trigonometry. Text, Poorman's *Applied Mechanics*. The application of the principles of statics to the solution of engineering problems. Both graphical and algebraic methods are used in dealing with concurrent forces, parallel forces, nonconcurrent and nonparallel forces. First term, two periods. Required of Juniors in Electrical and Mechanical Engineering. Assistant Professor FOSTER.

310. Applied Mechanics. Text, Poorman's *Applied Mechanics*. This is a continuation of the first term work, centroids and center of gravity, friction, and moment of inertia being the subjects studied. Second term, two periods. Required of Juniors in Electrical and Mechanical Engineering. Assistant Professor FOSTER.

Senior Year

401-402. Power Plants. A study of fuels and combustion; steam boilers; smoke prevention; superheaters and superheated steam; coal and ash handling apparatus; mechanical draft. A comparative study of steam engines; efficiencies; heat losses; influence of condensing and superheating; costs. A study of the elementary theory, efficiency and economy of the steam turbine; types, functions, and operation of condensers, feed-water heaters and purifiers, pumps, separators, traps, and drains. A study of piping and pipe fittings. Attention is also given to cost of power and to specifications for power plant equipment. Three periods, both terms. Required of Mechanical and Textile Engineering Seniors. Prerequisite, Mechanical Engineering 301 and 302. Professor VAUGHAN.

403. Gas Engines. Thermodynamics of the gas engine, theoretical comparisons of various types of internal combustion engines. Combustion, including combining weights and volumes, heating value, air required, etc. Gas engine fuels; solid, liquid, and gas. Gas producers, carburetors, and vaporizers. The fuel mixture, pressure, and temperature resulting from combustion. Modern types of internal combustion engines; auxiliaries, including ignition, starting, and

lighting systems; regulation, efficiency, and economy. Three periods, first term. Required of Seniors in Mechanical Engineering. Prerequisites, Mechanical Engineering 301 and 302, and Mechanical Engineering 309 and 310. Professor VAUGHAN.

406. Mechanics. A study of the kinetics of a particle with equations of motion for translation in a straight line, for curvilinear motion, and for rotation. The statements of the principles of Mechanics are applied to practical problems dealing with Mechanical Engineering. The principle of D'Alembert is followed in preference to any others. Text-books, Poorman's *Applied Mechanics*. Two periods, second term. Required of Seniors in Mechanical and Electrical Engineering. Assistant Professor FOSTER.

405. Mechanics of Materials. A study of the effects of loads and forces in engineering structures by use of the stress-strain diagram. Determination of ultimate stress and elastic limit of materials, with investigation for maximum and minimum bending moment shear. Torsion and its application to shafting, with theories as to elastic limit and failure. Three periods, first term. Required of Seniors in Mechanical and Electrical Engineering. Prerequisites, Mechanical Engineering 309 and 310. Assistant Professor FOSTER.

408. Heating, Ventilation, and Refrigeration. This subject treats of the various methods of heating, such as by open fires, hot air, steam, and hot water; of the proper ventilation of all types of buildings; of the various types of ice-making and refrigerating machinery, and their installation, care, and management; and of the cost of heating and cooling. Two periods, second term. Required of Seniors in Mechanical and Architectural Engineering. Prerequisites, Mechanical Engineering 301 and 302. Professor VAUGHAN.

409. Machine Design. Advanced Machine Design, based on the thermal and mechanical problems involved in the design of a steam engine for power, economy, and regulation. The students are given the requirements of the engine—such as speed, regulation, and economical point of cut-off for required horse-power—and are required to make calculations and detailed drawings for problems assigned. Three periods, first term. Required of Seniors in Mechanical Engineering. Prerequisites, Mechanical Engineering 303, 302 and 301. Assistant Professor FOSTER.

410. Gas Engine Design. The practical application of the principles discussed in Mechanical Engineering 403 and 304 combined with the rational and empiric methods of design as developed in standard practice. Three periods, second term. Either this or 412 or 404 or 414 is required of Seniors in Mechanical Engineering. Prerequisite, Mechanical Engineering 403 and 409. Assistant Professor FOSTER.

412. Turbine Design. The calculations for the most economical water rate are made and are based on the general principles related to the flow of steam through nozzles with the resulting action upon turbine buckets, including the losses due to friction, rotation, etc. The estimates for the sizes of the nozzles, shaft bearings, etc., with the shape of the buckets to suit the velocity diagrams, are made. Assembly and detail drawings are made. Three periods, second term. Either this or 410 or 404 or 414 is required of Seniors in Mechanical Engineering. Assistant Professor FOSTER.

404. Power Plant Design. A continuation of 401, consisting of a study of the selection, location, purpose, and proportioning of the essential details of steam power plants, such as number and size of units, engines, boilers, pumps, condensers, feed-water heaters, chimneys, auxiliaries, etc. The course consists of the study of references, lectures, and the drawing of power plant plans for the layout of the piping. Detail drawings are made and a bill of material is gotten out. Three periods, second term. Either this or 412 or 410 or 414 is required of Seniors in Mechanical Engineering. Prerequisite, Mechanical Engineering, 401, 403, and 409. Assistant Professor FOSTER.

414. Machine Design. Advanced work in design which will be a summation and practical application of the fundamental principles of machine design heretofore taken. Exact subject to be selected by the student and professor in charge. Three periods, second term. Either this or 412 or 410 or 404 is required of Seniors in Mechanical Engineering. Prerequisite, Mechanical Engineering 409. Assistant Professor FOSTER.

415-416. Mechanical Engineering Laboratory. The testing of simple machines for efficiency under various conditions of loading. Efficiency and economy tests on injectors, pumps, steam engines, and steam turbines. Boiler tests for determining horsepower and efficiency. In addition to the testing work, advanced heat problems will be given, dealing with the various heat cycles studied in the laboratory.

The determination of efficiency and economy of gas, gasoline, and oil engines. Tests for refrigerating effect in a cold storage plant. The testing of materials of construction for strength in compression and tension; determination of elastic limit, modulus of elasticity, etc. Two periods, both terms. Required of Seniors in Mechanical and Textile Engineering. Prerequisite, Mechanical Engineering 307 and 308. Associate Professor DANA.

417-418. Machine Shop Work. Making the parts of some machine or of an engine. Making tools, such as taps and reamers.

Laying out work. Duplicate and interchangeable parts. Working to standard gages. Two periods, both terms. Required of Seniors in Mechanical Engineering. Prerequisites, Mechanical Engineering 305 and 306. Mr. PARK.

419-420. Heat Engines. Nature and measurement of the units of heat, work, and power as used in steam engineering. A study of the properties of steam; use of the "Steam Tables" for solving problems. The theory of steam calorimeters, mechanical mixtures, and combustion of fuels. The application of the above to boilers for the purpose of determining rating, capacity, and efficiency. The function of the various boiler auxiliaries is critically examined. Two periods, both terms. Required of Seniors in Civil ngineering and Texile Manufacturing. Prerequisites. Physics 201-202, Algebra 102. Associate Professor DANA.

Short Courses

First Year

11-12. Mechanical Drawing. Instruction in care and use of instruments; lettering, geometrical drawing, projection drawing; isometric and cabinet projections; drawing from working sketches of machine details; tracing; blue-printing; elements of Descriptive Geometry; cylinders; cones, prisms, intersections and developments; miscellaneous problems. Two periods. Both terms. Required of students in Mechanic Arts. One peiod, first term. Two periods, second term. Required of students in Textile Manufacturing. Mr. MARTIN.

NOTE. East student will be required to furnish, at his own expense, the following outfit. To insure uniformity in grade of instruments and other supplies, the Department keeps for sale, at practically cost, the articles named below. These may be purchased elsewhere, but must be approved by the Department. Estimated cost of outfit, $20 to $25. Text-book. Drawing board, 23 by 31 inches. T-square, 30 inches. 60° triangle, 9 inches, transparent. 45° triangle, 7 inches, transparent. 12-inch triangular architect's scale. Irregular curve. 4H pencil. H or F pencil. Erasers for ink and pencil. Penholder with five points. Pencil sharpener. Instrument set consisting of 6-inch compass with pen, pencil, and lengthening bar; 5½-inch dividers with hair-spring adjustment; 3-inch bow dividers; 3-inch bow pencil; 3-inch bow pen; 5½-inch ruling pen; 4½-inch ruling pen.

21. Wood Shop Work. Elementary instruction in bench work, involving the use of ordinary hand tools, such as planes, saws, squares, chisels, etc. All exercises are made from blue-prints and sketches. This work leads up largely to cabinet lines, such as bookcases, tables,

drawing boards, and similar things. Experience is given in hand finishing, scraping, gluing, sand-papering, staining, and varnishing. One period, first term. Mr. Busby.

22. Wood Shop Work. Work similar to that outlined above. During the latter half of the spring term the time is devoted principally to wood turning, which includes turning between centers, face plate, chuck work, polishing and finishing. One period, second term. Prerequisite, Wood Shop 21. Mr. Busby.

31. Forge Shop Work. Treatment of iron and steel, the uses of punches, swages, fullers, and set-hammers, both hand and machine tools. Exercise in drawing, upsetting, forming; scarf, jump, butt, and cleft welding; making of forge and machine-shop tools from blue-prints; hardening and tempering, annealing, carbonizing, and case hardening; selection of tool steels. Special work on equipment and repairs about the College shops and laboratories. One period, both terms. Required of students in Mechanic Ats and Textile. Mr. Park.

41. Mechanical Technology. Lectures and recitations intended to acquaint students with general engineering terms and principles; also with materials used in engineering work, such as lumber, iron, steel, copper, brass, cement, coal, and other materials. Lantern slides are used wherever possible. Two periods, both terms. Professor Vaughan and Assistants.

Second Year

51-52. Machine Drawing. Sketching and drawing of machine parts and machines. Detail working drawings. Tracing and blue-printing. Three periods, both terms. Required of students in Mechanic Arts and Textile. Mr. Bridges.

61-62. Machine Shop Work. Bench and machine work. Exercises in chipping and filing. Exercises in lathe work, boring, reaming, drilling, planing, milling, and shaper work. Three periods, both terms. Required of students in Mechanic Arts. One period, both terms. Required of students in Textile Manufacturing. Prerequisite, Forge Work 31. Mr. Park.

71-72. Power Machinery. Descriptive study of the machinery of steam power plants, engines, boilers, condensers, pumps, steam turbines, piping, care and management, study of gas and oil engines. Combustion of fuels. Indicators; indicated, brake, and boiler horsepower problems. Three periods, both terms. Mr. Park.

82. Elementary Mechanics. This subject is intended to treat the elementary mechanics problems which arise in connection with

machine shops and drafting room practice. Two periods, second term. Assistant Professor FOSTER.

92. Gas Engine Laboratory. In connection with a study of the principles of the internal combustion engine in power machinery, this laboratory course is offered for the purpose of acquainting the student with the actual handling of such engines. Practice is given on the various types of gasoline, kerosene, and oil engines. One period, second term. Professor VAUGHAN.

81. Pattern-making. A study of pattern-making in its relation to molding; the practical construction of patterns to prevent warping and twisting; the making of special patterns, also patterns for different machines, such as drill presses, lathes, jointers, etc.; cores and core-boxes; introducing draft, shrinkage, finish, and the appliances and usage of modern pattern work. One period, first term. Prerequisite, 105 and 106. Mr. WORTH.

91. Foundry Work. Recitations and exercises in foundry work, including selection and working condition of sand; use and care of tools and machines; floor, bench, machine molding and core making; mixing cast iron and alloys. Management of cupola and brass furnace in iron and brass melting; making castings for special machines, general repairs, and machine-shop work; relation and merits of a variety of tools and materials used in foundry practice. One period, first term; taken along with 81. Mr. WORTH.

AUTOMOBILE COURSE

The Automobile Course is an outgrowth of the Emergency War Training Course for gas engine and motor car repairmen given at the College during the summer of 1918, under the supervision of the Committee on Education and Special Training of the War Department. The purpose of the Emergency War Training Course was to make specialists; that is, each man was to be thoroughly familiar with some one phase of the many phases of automobile mechanics. It is the purpose of the course now being given to acquaint the student with the fundamentals of Automotive Engineering from the standpoint of operation; and by operation is meant care, adjustment, and repair of all the units comprising the automobile.

The course will consist of both text-book and shop work, and will be so given that the shop work will parallel the text work. The various units of the automobile are to be studied individually and will be taken up in the following order:

Chassis, comprising frame, axles, steering gear and transmission; engine; fuel system and carburetor; ignition system; lighting and starting equipment.

That the student may not become too much of a specialist in automobile work alone, courses in Mathematics, English, Forge, and Mechanical Drawing will be scheduled in addition to the automobile text and shop work.

At present the Automobile Course is designed to cover a period of only one year; however, students taking this course will have the same privileges accorded students taking regular courses, and can enter into and enjoy all the College activities.

MILITARY ART

101. Military Art. (*a*) Theoretical: the organization and administration of a company; military courtesies and customs of the service; military hygiene, first aid and sanitation; physical training. Infantry drill, school of the platoon—to include close and extended order—and ceremonies. Infantry weapons and equipment—the rifle, description, nomenclature, care, handling, and the elements of marksmanship; signal communications—means of communication employed by troops in the field.

(*b*) Practical: organization of companies, assignments to squads, appointment of leaders and commanders; demonstrations and tests of military courtesies and customs; demonstrations and exercises in first aid to the injured, problems and demonstrations on the sand table in camp sanitation; construction of miniature models of camp sites, expedients, etc., setting-up exercises, mass games, mass athletics, and college athletics; infantry drill—school of the soldier, squad, platoon, and company in close order; school of the squad and platoon in extended order; participation in military ceremonies; the rifle, taking down and assembling, preliminary training in marksmanship, range practice where practicable, gallery practice, and intercollegiate competitions, signalling, practical training and demonstrations. Three periods, first term. Required of the Freshman Class and first year Short Course students.

102. Military Art. (*a*) Theoretical: interior guard duty—sufficient for an intelligent understanding of its importance and character; physical training; infantry drill, same as course 101a; infantry weapons and equipment; the infantry pack and bayonet; minor tactics—principles governing the composition, formation and operations of reconnoitering, visiting, harassing, fighting, connecting and flank patrols; messages and reports.

(*b*) Practical: performance of guard duty; mass games, mass athletics and college athletics; infantry drill, same as 101 b; adjustment, making-up, wearing the infantry pack in connection with practical exercises and gallery practice; bayonet training; patroling exer-

cises and problems, tactical walks, tests in correct action and exercises in the use of ground; exercises in carrying messages and making brief reports of military features in a given area, along roads, trails, and streams; military terms used in describing the terrain. Three periods, first term. Required of the Freshman Class and first year Short Course students.

201. Military Art. (*a*) Theoretical: military map reading and sketching; physical training; infantry drill, fundamentals of leadership, bearing, dress, manner, and voice of group leaders, how to give and receive orders and commands, effect of good and bad example, powers of a noncommissioned officer and how to use them; close and extended order, school of the company—combat, principles governing the formations and conduct of the platoon and company.

(*b*) Practical: problems in map reading, demonstrations on sand table and map, visibility of points, areas, etc., practice in making road sketches, outpost and position sketches; physical training, to develop ability in instructorship; infantry drill, participation with first year students, exercise of functions of noncommissioned officer instructing first year students, practical exercises with the unit. Three periods, first term. Required of Sophomore Class and second year Short Course students.

202. Military Art. (*a*) Theoretical: infantry weapons, the rifle, interior and exterior ballistics; the automatic rifle, nomenclature, care, characteristics, and employment of as an infantry weapon; the machine gun, nomenclature, care, characteristics, and employment of as an infantry weapon; minor tactics, patrol leading, advance and rear guards, outposts, selection and equipment of troops for the duty.

(*b*) Practical: the rifle, gallery practice, intercollegiate matches, range practice where practicable; the automatic rifle, taking down and assembling, gun drill, demonstration firing where practicable; the machine gun, taking down and assembling, gun drill, demonstration firing where practicable; infantry drill, same as 201 b; physical training, as instructors of first year students. Three periods, second term. Required of Sophomore Class and second year Shot Course students.

301. Military Art. (*a*) Theoretical: minor tactics, orders, approach march and deployment, combat reconnaissance, advancing the attack, the fire attack, the assault, organization of the ground; field engineering, principles and methods of military field engineering in all types of trenches and obstacles, organization of working parties and tasks, selection of locations for trenches, concealment and camouflage; infantry drill, school of the battalion and regiment in close order.

(*b*) Practical: minor tactics, map maneuvers, war game, problems on the map and sand table, tactical walks, participation with unit in tactical exercises; field engineering, demonstrations and constructions on sand table, construction of miniature models of all types of trenches and obstacles, reconnaissance, location and laying out of trenches; infantry drill, participation with the unit in drills and exercises; physical training, as instructors. Four periods, first term. Required of Juniors who elect the Advanced Course, R. O. T. C.

302. Military Art. (*a*) Theoretical: infantry weapons, the pistol, nomenclature, care, handling, and use; hand and rifle grenades, nomenclature, characteristics, care, handling, and tactical use; trench mortar and one-pounder gun (37mm.), nomenclature, characteristics, powers and limitations as an infantry weapon, and tactical use; minor tactics, same as 301a, the company in support, in reserve, and acting alone, ammunition supply.

(*b*) Practical: preliminary instruction for pistol practice, firing dismounted course, intercollegiate competitions; exercise in carrying and throwing grenades, exercises in tactical use in connection with tactical exercises by the unit; mortars and one-pounder gun, taking down and assembling, gun and mortar drills, exercises in handling in connection with tactical exercises; minor tactics, same as 301 b; infantry drill, participation with unit; physical training, as instructors. Four periods, second term. Required of Juniors who elect the Advanced Course, R. O. T. C.

401. Military Art. (*a*) Theoretical: minor tactics, Chapter III and Chapter IV Infantry Drill Regulations, to include the company; military history and policy of the United States, important campaigns and battles and deductions therefrom; military policy, including the period of the World War; economic history and the relations existing in our economic conditions and those of Europe, Asia, and South America, and their relation to military history; military law and rules of land warfare, the Articles of War, courts martial, and evidence; rules of land warfare, general knowledge of the principles.

(*b*) Practical: minor tactics, problems, map maneuvers, problems and illustrative work on map and sand table, war game, tactical walks, participation with unit in tactical exercises; physical training, as instructors; military law, moot courts; infantry drill, participation as leaders and instructors of the unit; administration, company paperwork, management and interior economy of a company. Four periods, first term. Required of Seniors who elect the Advanced Course, R. O. T. C., in Junior year.

402. Military Art. (*a*) Theoretical: musketry, range estimation, target designation, fire distribution, communication, signals and

transmission of firing data, use of cover, fire discipline, application of fire, conduct of fire, to include the functions of the Platoon Commander, with so much of the functions of the company commander as may be necessary for an intelligent understanding.

(*b*) Practical; musketry, exercises with landscape targets, tactical walks, exercises on the map and on the ground; minor tactics, same as 401 b; infantry drill and physical training, same as 401 b. Four periods, second term. Required of Seniors who elect the Advanced Course, R. O. T. C., in Junior year.

MODERN LANGUAGES

The primary purpose of the work in this Department is to enable the student to read and translate intelligently the literature of French, German, and Spanish. Work in translation is begun as early as possible and continued with increasing importance throughout the entire course. Graduate students electing to do work in the Department, and others wishing to do special work in this field, will arrange their courses with the head of the Department. So far as possible the work will be adjusted to suit their special needs. One year's work of either French, German, or Spanish is required of all members of the Reserve Officers' Training Corps.

French

203-204. Beginner's French. Grammar, composition, and translation. Meras, *Le Premier Livre*, first term. Meras, *Le Second Livre*, second term. Required of Sophomore Electrical and Mechanical Engineering students. Both terms (two periods). Professor HINKLE.

301-302. Beginner's French. Same as course 203-204. Required of Junior Agricultural students who enter the Reserve Officers' Training Corps and Juniors in Architectural Engineering. Elective for Junior Civil Engineering Students. Both terms, two periods. Professor HINKLE.

305-306. Intermediate French. Grammar, composition, and translation continued. Rapid reading and sight translation stressed. A general survey of French literature is made. Selections from Malot, Hugo, Dumas, Daudet, and DeMaupassant are studied in class. Parallel readings and reports. Required of Seniors in Architectural Engineering. Elective for Juniors in Electrical and Mechanical engineering and Seniors in Agriculture and Textile Chemistry. Prerequisite, 203-204 or 301-302. Both terms, three periods. Professor HINKLE.

401-402. Introductory Scientific French. Reading, translations, and discussions. Review of the fundamental facts of grammar.

Work based upon Daniel's *French Scientific Reader.* Other selections are read according to the needs of the class. Senior Elective. Open to graduates. Prerequisites, 203-204 or equivalent, and 305-306. Both terms, three periods. Professor HINKLE.

German

201-202. Beginner's German. Grammar, translation, and composition. Bacon, *German Grammar*, first term. Storm, Immensee; Gerstacker, *Germelshausen;* Seidel, *Der Lindenbaum*, and Hillern, *Höher als die Kirche*, second term. Required of Sophomore Chemical and Junior Dyeing students. Both terms (two periods). Professor HINKLE.

303-304. Introductory Scientific German. Reading, translation, and discussions. Special attention given to the grammatical peculiarities of scientific German and to the acquisition of a vocabulary of scientific terms. Wallentin, *Grundzüge der Natürlehre; Du* Bois-Reymond, *Vorträge;* and Lassar-Cohn, *Die Chemie im Täglichen Leben.* Required of Junior Chemical and elective for Senior Dyeing students. Both terms (three periods). Professor HINKLE.

403-404. Advanced Scientific German. An extensive course in scientific literature, with special reference to Chemical German. Designed to meet the needs of Seniors in Chemistry. Phillips, *Chemical German.* Helmholtz, *Populäre Vorträge.* Other authors will be read according to the needs of the students. Senior elective. Prerequisite, 201-202 and 303-304. Open to graduates. Both terms (three periods). Professor HINKLE.

NOTE—Graduate students electing this work will arrange for additional outside work.

Spanish

307-308. Beginner's Spanish. Grammar, composition, translation, and conversation. Marion-Des Garrennes, *Introduction a la Lengua Castellana*, first term. Ramsey, *Elementary Spanish Reader*, second term. Required of Junior Civil Engineering and Textile students. Elective for Juniors in Architectural Engineering. Both terms (two periods). Professor HINKLE.

405-406. Intermediate Spanish. A continuation of Beginner's Spanish. Designed primarily to develop rapid reading and conversational ability. A number of Spanish stories are read. Some attention given to composition and letter writing. Open to students who have had one year's work in the language. Elective for Seniors in Civil and Textile Engineering and Textile Manufacturing. Both terms (three periods). Professor HINKLE.

PHYSICS

101-102. Physics. The first half of this course is designed to give a knowledge of the fundamental principles of Mechanics as a basis for advanced work in Physics and Mechanics given later in the Engineering courses. The second half of the course includes a study of the fundamental principles of Heat, Sound, and Light. Demonstrated lectures are given each week and essays on parallel reading in the History of the Physical Sciences are required each month. Recitations are given on the lectures and on Black and Davis's *Practical Physics* as a text-book. Two periods, both terms. Required of Freshmen in Engineering and Chemistry. Professor HECK, Mr. FOSTER, Mr. ROBERTS.

103-104. Physical Laboratory. In the shops the engineering student handles and works with the materials of construction. In the laboratory he is taught to measure them and the interaction of forces. This course is arranged to make him familiar, through actual observation, with physical phenomena and teach him how they are measured and controlled. It includes practice in handling units in the British and Metric systems, measurements in the composition and resolution of forces, the lever, the inclined plane, the pendulum, density of materials, and specific gravity, the thermometer, heat and its effect on materials, sound laws, and the laws of lenses and mirrors. One period, both terms. Fee, $1. Required of Freshmen in Engineering and Chemistry. Mr. FOSTER, Mr. ROBERTS.

201-202. Sophomore Physics. A continuation of the study of Physics for Engineers, requiring more mathematical preparation and having a more practical application to engineering. The first half of the year is given to the elements of mechanics and heat, including elementary thermodynamics. The second half of the year is given to sound, magnetism, electricity, and light. A full survey of the phenomena of electricity and thorough practice in solving general electrical problems is given. Demonstrated lectures and recitations. Four periods, both terms. Required of Sophomores in Engineering and Chemistry. Prerequisite, Physics 101-102. Associate Professor DERIEUX, Assistant Professor DIXON.

203-204. Sophomore Physical Laboratory. A more advanced laboratory course in Physical Measurements. The theory of measurements and estimation of accuracy is given by lectures at the beginning of the work. Accurate measurements of heat and mechanics are given throughout the first half of the year. General quantitative measurements in light and the magnetic and electrical properties of materials comprise the work of the second half of the year. One period, both terms. Fee, $1. Required of Sophomores in Engineer-

ing and Chemistry. Prerequisite, Physical Laboratory 103-104. Associate Professor Derieux, Assistant Professor Dixon.

205-206. Textile Physics. As textile work continually presents the operations of forces in machines and the more intricate problems of humidity and elasticity, a thorough course in Physics is required of all Textile students. This course emphasizes the particular problems met in textile work and gives a broad basis for interpretation of related engineering problems. The work embraces lectures, recitations on text-book assignments, and practical measurements in the laboratory. Lectures are given with demonstrations of the action of forces in machines and materials as nearly as possible like those the student will meet in practical textile work. The historical development of the science is discussed to give the students a broader outlook and to stimulate a desire for further study. The demonstrations and the work in the laboratory are made with machines and problems taken from actual practice. Two periods of recitation and one period of laboratory, both terms. Required of Sophomores in Textile Manufacturing and Textile Chemistry. Fee, $1. Assistant Professor Dixon, Mr. Foster, Mr. Roberts.

207-208. Agricultural Physics. Physics is the study that treats of the action of all forces wherever found, whether in an engine or in the soil, in the atmosphere causing a change in weather or in a seed causing it to swell. Agricultural students must therefore study Physics to get a proper understanding of the cause and method of action of the mechanical and life forces that they meet in their other studies. The course in Physics required of Agricultural students is made thorough, and the subject-matter taken up is made to bear on the practical problems of agriculture. The course embraces lectures, recitations on a text-book, and measurements in the laboratory. The lectures are given with demonstrations and measurements of forces actually operating in machines and instruments as nearly as possible like those the student will meet in after life. The lectures also emphasize the historical development of the science for the purpose of giving the student an impulse toward continued development and study. They include a short course in the study of weather, and during the months of January and February weather maps and local observations are followed so as to give the students practical experience in forecasting. Two periods of class work and one period of laboratory throughout the year. Required of Sophomores. Fee, $1. Professor Heck, Mr. Foster, Mr. Roberts.

401-402. Advanced Physics. A course given to students who have had two years in Physics; of the grade of Senior work. Advanced work in Mechanics and Thermodynamics comprise the work of the first term. Optics and Theoretical Electricity and Magnetism

are taken up in the second term. Lectures and work on reference texts and parallel reading comprise the work of the course. Three hours a week throughout the year. Professor HECK.

403-404. Advanced Physical Laboratory. Four hours a week of work in making the more difficult determinations in heat, sound, light, and electricity. Acquaintance with the classical experiments and apparatus is sought, and in special cases the student is permitted to follow for part of the time simple research lines, according to the discretion of the professor in charge. Professor HECK, Associate Professor DERIEUX.

501-502. Research Laboratory. Eight to sixteen hours a week devoted to research in an original heat, sound, or electrical problem. Open to graduate students only. Professor HECK.

Short Courses

11-12. Physics. A physical science course is given under the head of Physics. The course embraces the historical development of the scientific ideas of today, with special emphasis on the development of practical machines and engines. Practical determinations of densities, strength of materials, measurements of heat and electricity, and other everyday determinations are made before the class. Machines are analyzed and the relations of force and energy are worked out. Practical heating and the wiring of electric circuits are also studied. The purpose of the course to be both educative and practical is carefully followed. Required of first-year students in Mechanic Arts. Three periods, both terms. Professor HECK.

POULTRY SCIENCE

Four-Year Courses

201. General Poultry. The first four weeks will be devoted to a discussion of the various phases of the poultry industry; four weeks to an elementary study of breeds and breeding; four weeks to a study of the principles of ventilation and sanitation; four weeks to poultry-house construction. Work in the poultry laboratory and at the poultry plant will be a part of the course, and will be an application of the principles taught. This course is for all regular four-year Sophomore Agricultural students who are taking Poultry for the first time. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Three periods, first term. Required of Sophomores in Agriculture. Mr. HALL.

302. Advanced General Poultry. This is a continuation of course 201, and will be assigned as follows: four weeks will be

devoted to the elementary study of parasites and diseases of fowls and their control; four weeks to the anatomy of the digestive tract and the physiology of digestion and a study of the principles of poultry feeding; four weeks to the balancing of feed mixtures and feeding of birds for the various purposes for which they are kept; three weeks to commercial plant construction and management; three weeks to the study of market grades of eggs and practical market methods, and a study of proper methods of dressing, handling, grading, refrigerating, packing, and shipping; a study of the method of saving feathers, grading, storing, packing, curing, and shipping same; and the methods of collecting, preserving, and handling poultry manure. Three periods, second term. Required of Juniors in Poultry. Elective for all other Juniors in Agriculture. *Poultry Culture, Sanitation, and Hygiene* is used as text. Mr. HALL.

301. Breeds and Judging. This is a detailed study of the origin of each breed, of the types and varieties, and of mating birds for the best results. Students taking the Poultry Course will have the opportunity to mate a pen of birds of any of the twenty breeds on the College and Station poultry plant and care for them for a year and note the results of the progeny. To aid in this study there are colored plates; also cards mounted with typical feathers from all breeds. The American Standard of Perfection will be used as a text. Three periods, first term. Required of Juniors in Poultry. Mr. HALL.

305-306. Poultry Anatomy and Physiology. A complete course in the anatomy and physiology of the domestic fowl. This includes a study of the bony structure, muscles, ligaments, and tendons, digestive structure, genito-urinary apparatus, the circulatory system, the nerves, and the special senses. Complete dissections will be made. This course prepares the student for the detailed study of diseases. *Anatomy of the Domestic Fowl* will be used as a text. Three periods, both terms. Required of Juniors in Poultry. Professor KAUPP.

402. Specialized Poultry Marketing. First, a six weeks detailed study of grading, handling, preserving, refrigerating, storing, packing, and shipping eggs. This will be followed by a detailed study of at least three large markets and of ten North Carolina markets, noting fluctuations in market prices and the changes in the feed markets for the same periods. Six weeks will be devoted to finishing, sticking, picking, trussing, scoring, grading, refrigerating, shaping, packing, and shipping dressed poultry. A study of market grades in detail and the fluctuations of the market prices, together with a study of the fluctuations of the prices of feeds, will be given for the same length of time. This will include the cost of production.

Six weeks are devoted to live fowls, finishing, grading, handling, shipping, and a similar study of the live poultry markets as above. Actual shipping experience will be given. Three periods, second term. Required of Seniors in Poultry. Professor KAUPP.

401. Diseases and Poultry Pathology. In this course the time will be divided as follows: four weeks to a detailed study of medical parasitology, giving the habits of the parasites affecting the domestic fowls, effects upon their host and methods of their control and eradication; six weeks to noncontagious diseases and their treatment; eight weeks to contagious diseases, prevention or control, and treatment. Laboratory work will be given to accompany each division. Museum specimens, as well as autopsies and clinical cases from the research laboratory will be used. *Diseases of Poultry* will be used as a text. Three periods, first term. Required of Seniors in Poultry. Professor KAUPP.

403. Poultry Accountant Course. This course will cover detailed methods of keeping flock, brooder, incubator, and general poultry accountant work. Methods of making poultry surveys, and other work pertaining to poultry data. One period, first term. Required of Seniors in Poultry. Professor KAUPP.

405. Poultry Seminar. In this course there will be taken up and discussed the printed and available bulletins and reprints from the various research laboratories and plants of the various problems and results covering all phases of advanced poultry work. Two periods, first term. Required of Seniors in Poultry. Professor KAUPP.

404. Incubation, Brooding, and Flock Management. This course will be divided as follows: four weeks to the running of an incubator, each student operating his own incubator; eight weeks to lectures and practice work in operating a brooder, each student operating his own brooder, taking the chicks he hatches in the incubator; six weeks to broiler feeding and caponizing and capon production. During the entire course the student has charge of a plant flock, caring for the birds and summing up at the end of the month the various details of the accounting. The student also has the opportunity of setting a hen and caring for her brood. Fee, $2. Three periods, second term. Required of Seniors in Poultry. Three periods, either term. Elective for all Seniors in Agriculture. Mr. HALL.

304. Advanced Poultry Breeds and Judging. This is an advanced course which is to be preceded by course 301, Breeds and Judging. A continuation will be made of the study of the type and feather pattern of the various solid and parti-colored birds and plant demonstrations as to proper way of mating each breed and variety

to get the desired results. Also there will be a continuation of practice lessons in judging the various breeds. The College and Experiment Station poultry plant keeps twenty-five breeds of poultry and pet stock, many of which have won medals, trophy cups, diplomas, and ribbons at various poultry shows, thus insuring the highest type of birds for judging experience. Junior elective for all Agricultural students. Three periods, second term. Mr. HALL.

Rehabilitation Poultry Courses

1. General Poultry. This will include an elementary discussion of the magnitude of the poultry industry and a general elementary discussion of the various breeds of poultry and the purposes for which they are kept. The course will give a general idea of the scope and meaning of production, storage, and distribution in its elementary form, and will include an elementary fundamental discussion of poultry work, including culling, mating, feeding, care of eggs, natural incubation, and club marketing problems. *Essentials of Poultry Raising* is used as text. Five hours a week. First grade, first term, for Rehabilitation Poultry students, and first grade, third term, Animal Husbandry Rehabilitation students. Mr. HALL.

2. General Poultry. A more detailed study of the breeds of poultry, culling, mating, poultry-house construction, and a study of the various feeds, mixing feeds, and the care of a farm flock on the College poultry plant under the direction of an instructor. Work will also be given in the construction and use of poultry-house equipment, care of birds on the range, and care of breeding and egg production flocks. General poultry plant work as practice periods will be required. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Second grade, second term, for Rehabilitation Poultry students; first grade, second term, for Horticultural Rehabilitation students. Five times a week. Mr. HALL.

3. Breeds and Judging. A discussion of the types and varieties of poultry, including both standard and utility judgings. The twenty-five breeds and varieties of poultry kept on the College and Experiment Station poultry plant will furnish ample material for both classes of birds, which will be judged for type and feather pattern, for egg production, and for meat production. The American Standard of Perfection will be used as a text. Five times a week. Second grade, third term, for Rehabilitation Poultry students. Mr. HALL.

4. Poultry Marketing. This course will include a study of the methods of fattening, dressing, grading, packing, shipping, refrigerating, storing, and distribution of market fowls. Actual experience in fattening, picking, and dressing will be given. The problem of shipping fattened chickens to market will also be discussed. Practice in

candling, grading, packing, shipping, storing, and distribution of eggs will be given. A study of the large egg and dressed poultry markets will be made. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. First grade, first term, for Rehabilitation Poultry students. Five hours a week. Mr. HALL.

5. Poultry Diseases. First there will be given a preliminary study of the digestive organs and other vital systems, as the urinary, genital, and respiratory systems. Then a study of the more common external and internal parasites, their importance, and means of combating them will be taken up. Then there will be a study of the noncontagious diseases, which will be followed by a study of the more important contagious diseases, their mode of spread, and effective methods of combating them. *Poultry Diseases* will be used as a text. First grade, second term, for Rehabilitation Poultry students. Five times a week. Mr. HALL.

6. Incubation and Brooding. This course will include a study of the principles of construction of incubators and brooders and the methods of operating them. Each student will operate an incubator, taking the chicks he hatches, and brood them, using oil burning brooders. He will also care for them after they have been placed on range. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Five hours a week. First grade, third term, for Rehabilitation Poultry students. Mr. HALL.

Short Course

21. Farm Poultry. This course will include the fundamentals of selection and mating for egg production, for meat production, and for dual purpose fowls. Practical culling work to learn how to eliminate nonproducers will be given. Methods of ventilation and of poultry-house construction, poultry feeds, feeding for egg production, artificial and natural incubation and brooding, feeding of chicks during the brooding period and as chicks on range. Grading, candling, packing, storage, and marketing of eggs. Fattening, dressing, refrigerating, packing, and marketing of poultry. Selection of hatching eggs and methods of packing for shipping. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Three periods, first term, second year. Two-year course in Agriculture. Mr. HALL.

Courses for Graduates

Students entering graduate work in Poultry Science should have a thorough training in the fundamental principles of the subject. The following graduate courses are offered for the year 1921-22.

501-502. Animal Nutrition. This course, given by the Animal Husbandry Division, is open to advanced students in Poultry Science

work. In this course there will be a study of the recent scientific publications on the chemistry and physiology of nutrition of animals, and the chemical and physiological changes and processes involved in the activities of animal life. The student will be expected to follow out courses in assigned reading, hold conferences with the instructor, and submit regular reports on the progress of his studies.

503-504. Investigational Work. The Poultry Science Department has many investigational projects under way. The graduate student will be expected to select one of the subjects below and devote half of his time to assisting in carrying the investigation forward: (*a*) the effects of various rations on egg production; (*b*) the effects of various rations upon body development of poultry; (*c*) the methods of feeding, handling, and control of chick mortality; (*d*) the effects of feeds upon the quality of eggs; (*e*) the effects of feeds upon the quality of flesh of the table fowls; (*f*) the effects of cottonseed meal upon poultry breeding stock, egg production, development of young, and constitutional vigor; (*g*) the relative value of various animal proteins for feeding fowls; (*h*) Mendelian studies; (*i*) laboratory work in Poultry Pathology, Anatomy, or Physiology. One selection may be made from the Animal Industry Division subjects. Professor KAUPP.

Two-Weeks Course

Poultry

There will be taught newer methods of culling birds to eliminate from the farm flock the unprofitable ones. Selection and breeding for egg-production, broilers, and general utility will also be thoroughly discussed.

The proper methods of constructing houses for layers and breeding fowls, also range houses for youngsters. How to house the sitting hen and her brood will receive attention.

There will be discussed the various feeds and how properly to feed for egg-production; the young and growing chicks; and the sitting hen and her brood.

Candling, grading, packing, shipping eggs by parcel post and express.

Fattening, sticking, picking, refrigerating, and marketing poultry will be given attention. Mr. HALL.

SOILS

Four-Year Courses

202. Geology. The work of the atmosphere, water, and ice in bringing about present earth and soil conditions. The principal soil-forming minerals and rocks will be considered in relation to their

effects in determining soil characteristics. Three periods, second term. Required of Agricultural Sophomores. Mr. Royston.

301-302. Soils. The physical characters, such as water-holding capacity, capillarity, effect of mulches, temperature and weight, and modification of these characters by tillage, cropping, and all operations of practical soil management, are discussed and exemplified in the classroom, laboratory, and field. Some attention is given to the classification of soils in the United States, and especially in North Carolina. The physical, chemical, and bacterial soil conditions are discussed in relation to each other and to their effects on soil fertility. Three periods, both terms. Required of Agricultural Juniors. Deposit, $2. Prerequisites, Chemistry 101-102, 201-202, and 212, and Physics 231-232. Professor Sherwin and Mr. Royston.

304. Soil Survey. A study of the principal soil types of the United States and all the important types of North Carolina; their formation, physical and chemical characteristics, crop adaptations, and identification. Field examination of all local types will be made. Three periods, second term. Required of Juniors in Soils; elective for other Juniors. No deposit. Professor Sherwin and Mr. Royston.

402. Fertilizers. Fertilizing as a factor in soil management and economical crop production. Sources, composition, availability, and value of various commercial and farm fertilizers. Comparative value of the elements of plant food in different carriers as shown by their productive capacity. Three periods, second term. Required of all Agricultural Seniors, except those in Veterinary Medicine. Prerequisite, Soils 301-302. Professor Sherwin and Mr. Royston.

403-404. Advanced Soils. In this course the student will be guided in the study of any line of Soils work he may choose, along either practical or scientific lines. Laboratory and field work will be given. Considerable reference will be made to Experiment Station literature with the aim of acquainting the students with the literature on the subject, and with the methods of investigation used. This course will be of special help to men who are to engage in either farming or demonstration work, as well as to those primarily interested in Soils. Three periods, both terms. Required of Seniors in Soils; elective for all other Seniors in Agriculture, except those in Veterinary Medicine. No deposit. Prerequisite, Soils 301-302. Professor Sherwin and Mr. Royston.

Short Course

21. Soils and Soil Fertility. A study of the soil as affected and determined by its source and method of formation. Texture and humus as they affect the physical and other properties. Conservation

and control of soil moisture. Composition, sources, and efficiency of various fertilizing materials; original and residual effects on the soil and on each other. Home mixing and duplication of formulas. Various forms of lime; their composition, agricultural value, and best method of using. Farm manure: its composition and value in soil building; methods of handling to conserve its plant food and to aid most economical crop production. Four periods, first term, second year. Professor SHERWIN and Mr. ROYSTON.

Courses for Rehabilitation Students

Physical Geography. A study of the effect of the natural agencies on the earth's surface. Causes and movements of the winds; rain and snow; carving of land farms; plant and animal life under various conditions of topography and climate. First and second terms, third grade.

Geology. A study of the formation of soil and its characteristics as determined by the climate and origin. Third term, third grade. Five hours a week.

Soils and Soil Fertility. A study of the effect of physical properties, plant-food content, cultivation, rotation, and fertilization on the productiveness of soils. Third term, second grade. Five hours a week.

FOUR-YEAR COURSES IN TEXTILE MANUFACTURING, TEXTILE ENGINEERING, AND TEXTILE CHEMISTRY AND DYEING

106. Textile Engineering Lectures. A series of lectures intended to acquaint students with names and terms used in textile work, and a general survey of the textile industry. Various elementary textile subjects are given as an introduction for the work which follows in the higher classes. One period, second term. Required of Freshmen in Textile Manufacturing. Mr. HART.

101-102. Carding and Spinning. Lectures and recitations; practice in operating card and spinning room machinery. Cotton: Classifying the plant, its growth, varieties, ginning, baling, and marketing the raw staple. Cotton at the mill; selecting and mixing. Openers and lappers; cards, sliver lap machines; ribbon lap machines; combers, railway heads; drawing frames, slubbers; intermediate; speeders; jacks. Ring spinning frames and mules. Spoolers. Twisters; reels; cone-winders. Construction and functions of each machine; making the various calculations. Drafts, speed of parts, production. Producing yarns of different counts, single and

for egg-production; the young and growing chicks; and the sitting ply. Testing yarns for breaking strength and elasticity. Required of Freshmen (for number of periods see tabulation) Sophomores, Juniors, and Seniors. Mr. Price.

201-202. Carding and Spinning. Continuation from Freshman year. See course 101-102. Required of Sophomores. Two periods, both terms.

301-302. Carding and Spinning. Continuation from Sophomore year. See course 101-102. Three periods, both terms. Required of Juniors in Textile Manufacturing and Engineering.

401-402. Carding and Spinning. Continuation from Junior year. See course 101-102. Required of Seniors. Four periods, both terms, Textile Manufacturing; three periods, both terms, Textile Engineering.

103-104. Weaving. Lectures and practice in warp preparation, operating and fixing looms, cloth finishing machinery. Warp preparation; pin frame warper; section warper; beam warper; construction of beam warper, stop motion, measuring motion, creel; pattern warp making; long and short chain beamers. Slashing: Steam cylinder slasher; hot-air slasher; construction of slasher, creel, cylinder, immersion roll, squeeze rolls, drying fan, separator rolls, winding yarn on beam, cone drive, slow motion, measuring and cut marking motion. Sizing: Construction of size; kettle; size mixing and boiling; division of sizing ingredients; value of ingredients; sizing recipes for light, medium, and heavy sizing. Loom mounting: Reeds and harnesses; drawing in and putting warps in loom. Looms: Hand looms and power looms; construction of plain loom; principal movements in weaving; let-off and take-up motions; filling stop motion; warp stop motion. Cams and their construction. Automatic looms, construction and advantages. Drop box looms: Chain building for box looms; changing boxes to have easy running looms; construction and value of multipliers; timing and fixing box motions. Pick and pick-looms. Box-chain and multiplier-chain building; arrangement of colors in boxes to give easy-running loom. Ball and shoe-pick motion. Construction and fixing of head motion. Dobby, single and double index; construction and fixing of dobby; extra appliances necessary for weaving leno, towel, and other pile fabrics. Value of easers; half motion and jumper attachment for leno. Springs and spring-boxes. Pattern chain building. Jacquard: Single and double lift; construction and tie-up. Weave-room calculations, speed and production calculations, relative speed of looms, counts of cotton harness. Finishing: Inspection of cloth; singeing and brushing; calendering, tentering; folding and packing for the market. Equipment necessary for warp preparation, weaving, finishing; approximate cost of production

of fabrics in the different processes. Text-book, Nelson's *Practical Loom Fixing.* Required of Freshmen, (for number of periods see tabulation) Sophomores, Juniors, and Seniors. Professor NELSON, Mr. PRENTIS, Mr. HART.

203-204. Weaving. Continuation from Freshman year. See course 103-104. Required of Sophomores. Two periods, both terms.

303-304. Weaving. Continuation from Sophomore year. See course 103-104. Required of Juniors. Three periods, both terms, Textile Manufacturing; two periods, both terms, Textile Engineering.

403-404. Weaving. Continuation from Junior year. See course 303-304. Required of Seniors. Four periods, both terms, Textile Manufacturing; two periods, both terms, Textile Engineering.

205-206. Textile Designing. Lectures and practice in designing. Method of representing weaves on design paper. Foundation weaves: Plain, twill, satin. Ornamentation of plain weaves. Wave designs, pointed twills, diamond effects. Plain and fancy basket weaves, warp and filling rib weaves. Broken twills, curved twills, corkscrew twills, entwining twills. Granite weaves, satin shading. Combination of weaves; figured weaving on plain ground. Satin and figured stripes on plain ground. Spots arranged in different orders on plain, twill, satin ground. Imitation leno, honeycomb weaves. Bedford cords and combination with other weaves. Wave designs, pointed twills, diamond effects. Plain and fancy piques. Double plain, figured double plain. Double cloths. Cloths backed with warp; cloths backed with filling. Cloths ornamented with extra warp; cloths ornamented with extra filling. Cotton velvet. Corduroy. Matelasse leno weaves with one, two, and more sets of doups. Principles of working both top and bottom doups. Combination of plain and fancy weaves with leno. Methods of obtaining leno patterns. Jacquards. Distribution and setting out of figures for geometrical and floral effects. Distributing figures to prevent lines. Areas of patterns. Preparation of sketches. Transfer of sketches to design paper. Painting in the design with different weaves according to sketch. Shading the patterns. Card cutting and lacing. Required of Sophomores, (for number of periods see tabulation) Juniors, and Seniors. Professor NELSON, Mr. PRENTIS.

305-306. Textile Designing. Continuation from Sophomore year. See course 205-206. Three periods, first term; two periods, second term. Required of Juniors in Textile Manufacturing.

405-406. Textile Designing. Continuation from Junior year. See course 205-206. Three periods, both terms. Required of Seniors in Textile Manufacturing.

208. Cloth Analysis and Fabric Structure. Calculating particulars of cloth from data ascertained from samples. Shrinkages. Dents in patterns; patterns in warp. Drafting and pattern chain

building. Reed and harness calculations. Calculations to obtain quantities or warp and filling in stripes and check fabrics. To find number of threads per inch, using a given weight of warp; also number of picks per inch, using a given weight of filling. Yarn calculations. System of numbering woollen, worsted, silk, linen, and cotton yarns. Determination of one system of yarn to that of another. Textile calculations. Determining the number of threads and picks per inch to make a perfect cloth. Calculations to determine the texture in an unequally reeded fabric. Diameter of threads. Balance of cloth. Texture for double cloth. Required of Sophomores, (for number of periods see tabulation) Juniors, and Seniors. Professor NELSON, Mr. PRENTIS, Mr. HART.

308. Cloth Analysis. Continuation from Sophomore Year. See course 208. One period, second term. Required of Juniors in Textile Manufacturing.

407-408. Cloth Analysis. Continuation from Junior year. See course 208. One period, both terms. Required of Seniors in Textile Manufacturing.

209-210. Analytical Chemistry and Dyeing. This course comprises a systematic study of the procedure for identifying and classifying compounds. A regular qualitative procedure for separating the metals into groups, analyzing the groups, and determining the acidic constituents is carried out. This course aims to familiarize the student with the identification of compounds, determination of adulterants, etc., which is supplemented later in the course by quantitative determinations.

The student learns the principles and procedures upon which the art of bleaching and dyeing is based. He learns how to identify the various fibers, and the chemical methods for estimating their relative proportions in mixed goods. He next learns the action of the mineral acids under various conditions upon the fibers, and the action of volatile and nonvolatile organic acids. The action of acid salts and salts which liberate a mineral acid when heated is studied, together with the commercial application of this principle to the recovery of wool from rags by "carbonization." The student is then acquainted with the action of alkalies upon the fibers, and with mercerization. He next studies the use and misuse of "bleach" or "chemic." Procedures for mordanting and weighting the fibers are carried out, along with the fixation of compounds. An experimental outline of a practical cloth bleach for printers and dyers by the lime-and-ash process, and the bleaching of market whites is carried out with careful comparisons and thorough study. The sodium peroxide process is also studied, carried out, and compared. The student then bleaches wool by the bisulphite, permanganate, and sodium peroxide processes,

and finishes by studying the injurious effects of improper water and the means of remedying these effects. In this course the student conducts experiments to illustrate methods and principles as a supplement to the lectures, and mounts samples for a comparison of results. Two periods, both terms. Required of Sophomores. Mr. LEDDY.

309-310. Dyeing. The Junior year is devoted exclusively to the study of dyes and the various methods of applying them. The student starts with the direct cotton colors and compares the action of the various assistants, the effect of temperature, "long" and "short" baths, etc. The dyeings are tested for fastness to washing, soaping, light, perspiration, cross-dying, etc. He then takes up the methods of improving the fastness, among which are included after-treatment with potassium bichromate and copper sulphate, topping with basic dyes, and diazotizing and developing. These dyeings are again tested, and in addition are tested for fastness to street dirt, ironing, chlorine, etc. The methods of applying these colors to wool and silk, together with after-treatments, are next taken up. A thorough study of the sulphur colors is the next step. The methods of applying the basic colors to cotton are next studied, after which the student takes up their application to wool and silk. The subjects next in order are the acid dyes, eosines, and alkaline blues, the after-chromed acid colors, acid colors on chrome mordants, mordant dyes on alum mordant, tin mordant, etc. The vat colors, including the Cibas, Helindones, Algoles, Indanthrenes, etc., are very thoroughly taken up. The laboratory work which supplements the lectures comprises a large number of experiments, samples from which are mounted for comparison.

The second term is devoted to the study of special processes and printing. Aniline black is applied by the single bath method (hot and cold) by the "aged" or copper black method, and by the steam or prussiate method. The application of paranitraniline red to cotton yarn is next taken up, followed by a thorough study of dyeing with indigo employing the copperas, zinc-lime, and hydrosulphite vats. Mixed goods are dyed uniform or different colors by the single bath, double bath, and several bath methods. The art of printing, including the preparation of the cloth, mixing the colors, choice of thickeners, mordants, assistants, etc., and the various styles of printing are taken up. The lectures are supplemented by laboratory work. One period, both terms (Juniors). Required of Juniors and Seniors. Mr. LEDDY.

409-410. Dyeing. Continuation from Junior year. See course 309-310. Required of Seniors. Two periods, both terms, for Textile Manufacturing; three periods, both terms, for Textile Chemistry and Dyeing.

311-312. Dyeing. Analyses of Textile Fabrics, including "sizing," oil and grease, mineral oil, rosin, "condition," ash, mordants, etc., are carried out, followed by analyses of dyestuffs to determine their classification, testing of dyes for tinctorial power and money value, and determinations of suitability, mixtures, etc. Color mixing and shade matching are very carefully carried out with thorough study. Laboratory experiments supplement this work, and the student mounts samples of his work. Procedures for waterproofing by the "dry method," rendering fabrics "noninflammable," for testing cotton, and injured cotton, analyzing Turkey Red Oil, etc., are carried out. This is followed by a study of starches. The student devotes considerable time to the synthesis and study of intermediate products and dyes. This is designed to aid those of our students who wish to specialize in dyestuff manufacturing and sales industry. The laboratory work is devoted mainly to the study of commercial preparations which are related to dyes and intermediates. The student prepares nitro-benzene, aniline, acetanilide, p-nitracetanilide, and p-nitraniline, p-amidoacetanilide, and p-sulphanilic acid. Dimethylaniline, and nitro-sodimethylaniline hydrochloride.

M-toluylene diamine, benzidene, benzal chloride, m-dinitro phenol, beta-napthol, Schaffer's salt, R salt, alpho-naphthylamine, anthraquinone, and anthraquinone sulphonic acid.

Fast Green O, Napthol Yellow S, Chrysoidine R, Orange 11, Fast Red B, and A. Chrysamine G, Benzo purpurine 4B, Napthol Black B, Auramine O, Malachite Green, Methyl Violet, Fluorescein, Methylene Blue, Induline spirit soluble, and sulphur Black T. One period, both terms (Juniors). Required of Juniors and Seniors. Mr. LEDDY.

411-412. Dyeing Laboratory. Continuation from Junior year. See course 311-312. Required of Seniors. Two periods, both terms, Textile Manufacturing; four periods, both terms, Textile Chemistry and Dyeing.

313-314. Teacher Training. Two periods, both terms. Elective for Juniors in all Textile courses. (Course to be arranged.)

413-414. Teacher Training. Two periods, both terms. Elective for Seniors in all Textile courses. (Course to be arranged.)

Two-Year Short Course

11-12. Carding and Spinning. Lectures and recitations; practice in operating card and spinning room machinery. The lectures will cover as many machines as possible during the year, and the practical work will consist of operating the various machines. One period, both terms, both years. Mr. PRICE.

21-22. Weaving. Lectures on construction of plain, twill, satin, and other looms will be given. Lectures begin with the construction of plain loom, first taking up the principal movements in weaving, then the various secondary or auxiliary movements, and the relation and timing of one movement to another. Practical work will consist of operating plain, twill, satin, gingham, and other looms. Three periods, both terms, both years. Professor NELSON, Mr. PRENTIS.

31-32. Textile Designing. Lectures and practice in designing. Methods of representing weaves on paper. The foundation weaves, plain, twill, and satin are the first subjects studied, advancing to derivate and other weaves. Color and other ornamentation of weaves and fabrics. Combination of different weaves and their effect in the cloth. Two periods, first term; one period, second term, first year; three periods, first term; two periods, second term, second year. Mr. PRENTIS.

42. Cloth Analysis and Fabric Structure. Calculating particulars of cloth from data ascertained from samples. Reed and harness calculations. Drafting and pattern chain building. Calculations to obtain quantities of warp and filling in different fabrics. Yarn calculations. System of numbering cotton, woollen, worsted, silk, and linen yarns. One period, second term, both years. Mr. PRENTIS, Mr. HART.

VETERINARY MEDICINE

The Department of Veterinary Medicine offers the first two years of a four-year course in Veterinary Medicine; the subject of Animal Diseases to Seniors in Agriculture, also Veterinary Hygiene and Sanitation; the subject of Animal Diseases to the second year short course and Rehabilitation students; and the subject of Diseases of Livestock in the two-weeks course in Agriculture. A one-week graduate course in Veterinary Medicine is offered annually, open to the graduate veterinarians in the State.

401. Veterinary Hygiene and Sanitation. The subject-matter will deal specifically with some phases of the physiology of the following systems: digestion, reproduction, locomotion, respiration, and circulation in domestic animals. The diseases which affect the organs of the different systems will be enumerated and suitable hygienic measures to avoid such troubles will be discussed. Three periods, first term. Required of Seniors in Agriculture. Professor REEDER.

303-304. Histology. A microscopical study of the tissues of the body, treating of the cell as the unit of structure, and of its functions; also of tissues, their classification, and their relation to the structure of organs. From dissections and proximity to slaugh-

ter-house, abundance of histological material of various animals is obtainable. Three periods, both terms. Required of Juniors in Veterinary Medicine. Fee, $1. Dr. Corl.

301-302. Veterinary Anatomy. This subject will deal with the study of the skeleton, including bones and joints, and of the muscles. A complete dissection of the muscles of the horse will be made. Six periods, first term; four periods, second term. Required of Juniors in Veterinary Medicine. Fee, $2. Dr. Corl.

306. Materia Medica. This study of the inorganic drugs used in comparative medicine will treat of their classification, composition, physiological actions, and doses. Two periods, second term. Required of Juniors in Veterinary Medicine. Professor Reeder.

405-406. Veterinary Anatomy. A continuation of course 301-302. A study of the digestive, respiratory, circulatory, urinary, reproductive, and nervous systems will be made, with dissections of each in the horse. Five periods, first term; six periods, second term. Required of Seniors in Veterinary Medicine. Fee, $2. Dr. Corl.

403-404. Veterinary Physiology. A comparative study of the bodily functions of the various domestic animals is made, with special reference to digestion, respiration, circulation, reproduction, and secretion. Three periods, both terms. Required of Seniors in Veterinary Medicine. Professor Reeder.

402. Materia Medica and Pharmacy. Course 306 as described above will be continued by a study of organic drugs. The Pharmacy course will include prescription writing and laboratory work in the preparation, compounding, and preserving of medicines. Three periods, second term. Fee, $1. Required of Seniors in Veterinary Medicine. Professor Reeder and Dr. Corl.

407-408. General Pathology. As contrasted with special or systematic pathology, this course will treat of general causes of disease, congenital, postnatal, infectious, and noninfectious; of morbid and reactive tissue processes, congestion, inflammation, fever, immunity, etc.; of progressive tissue changes, regeneration, tumors, etc.; of regressive tissue changes, degeneration, necrosis, death, etc. A large number of specimens of diseased organs and tissues already present in the museum, and opportunity for collecting others from clinics and abattoir, insure plenty of material to demonstrate various macroscopical and microscopical tissue changes. Three periods, both terms. Required of Seniors in Veterinary Medicine. Fee, $1. Dr. Corl.

410. Animal Diseases (Prevention and Control). Many diseases of both man and animal are preventable, and never before was the old adage "An ounce of prevention is worth a pound of cure"

more applicable. To effectively prevent and control most of our diseases, it is essential to know something of their causes, habits, mode of entering the body, and bodily resistance (immunity). The above phases will be largely considered in this course. Two periods, second term. Elective for Seniors in Agriculture. Professor REEDER and Dr. CORL.

501-502. Experimental Physiology. Appreciating the value of many of the interesting phenomena in physiology recently discovered, opportunity is here given to consider those specially applicable to the animal husbandman, the teacher, and the research student. The course will cover investigations dealing with various phases of reproduction and milk secretion; of internal secretions and of those phenomena of the circulation resulting from infections, pregnancy, etc., such as hemolysis, bacteriolysis, and agglutination. First or second term. Elective for Postgraduates. Professor REEDER and Dr. CORL.

Short Courses

22. Animal Diseases. This course must not be confused with course 410. In this the principles of the make-up and working of the body must be studied in a general way in order to understand the several abnormal conditions to be discussed. The more common preventable abnormal conditions will be considered first; then will follow a short discussion of the several contagious and infectious diseases, their prevention and control. Two periods, second term. For second year Short Course and Rehabilitation students. Professor REEDER.

Diseases of Livestock. Lectures will briefly cover elementary anatomy, physiology, hygiene, sanitation, and common diseases of animals. Special emphasis will be laid upon the general causes of diseases, the means or measures of preventing and controlling them, and things not to do. Professor REEDER.

One-week Graduate Course in Veterinary Medicine

Open to graduate veterinarians only. Alterations in the following outline of subjects may be made to suit the wishes of those attending. The subject-matter in each case will be condensed so as to cover the entire field during the week.

Animal Husbandry. Judging, feeding, and breeding. This course is given by the Animal Husbandry Division. The Livestock Judging will embrace the points to be considered in determining the fitness of animals for specific purposes. The Stock Feeding instruction will cover the various feeds available, their composition, and the methods of compounding balanced rations. The Animal Breeding

lectures will discuss the selection, the laws of breeding, and the management of breeding animals.

Dairying. This course is offered by the Dairy Division. The equipment necessary for a dairy, the methods of conducting a dairy business, and the composition of milk will be the subjects of study. Laboratory demonstrations will be given to illustrate methods of testing and standardizing milk and cream, also the scoring of butter.

Parasites and Parasitic Diseases. Three or more lectures will be given on this subject, taking up the more important internal and external parasites, using for the purpose of demonstration one of the largest private collections of parasites in this country. Symptoms of parasitism, methods of recognition of the parasites, lesions produced, and means of eradication will be thoroughly discussed. Professor KAUPP.

Common Diseases of Poultry. Three or more lectures will be given on this subject, taking up the more troublesome diseases, both parasitic and bacterial, making actual demonstrations from the poultry and pathology research laboratory run jointly by the College and the Station. Professor KAUPP.

Meat and Milk Inspection. The subject will be covered in the discussion of an outline indicating what inspection for Southern towns should consist of. The work will be demonstrated by visits to the municipal abattoir, the city market, and some of the better dairies about Raleigh.

Anatomy and Dissection. Condensed outlines of the different anatomical systems will be given, such as of skeleton, including joints, and muscular, nervous, digestive, circulatory, respiratory, urinary, and genital systems. Abundance of well-injected equine subjects will be available for dissection of all parts, but particular attention will be given those areas involved in special surgery. Dr. COEL.

Veterinary Physiology. The physiology of digestion, nutrition, and reproduction has made much advancement in the past five years. It is, therefore, essential that we understand the latest and the most authentic scientific findings. Lectures will be given summarizing the essentials of these subjects. Laboratory methods, also, will be used to demonstrate the actions of the digestive fluids, and prepared specimens shown to illustrate, as far as possible, the phenomena of reproduction. The remaining time will then be given to a practical discussion of the respiratory and circulatory systems. Professor REEDER.

Clinical Diagnosis and Clinics. The subject-matter will be given in the form of a synopsis of the essential factors concerned in

determining the alerations in each of the anatomical systems and regions of the animal body. Demonstrations will be made in the conduct of clinics at the veterinary hospital and by various laboratory and field methods of diagnosis. It is expected that there will be opportunity to show typical reactions from use of intradermal and ophthalmic tuberculin. Drs. Corl, Koonce, Reeder, Kaupp.

Open Discussions on Surgery, Practice, Meat and Milk Inspection, etc. Leaders of each chosen by those attending. Stated periods will be appointed for each of the above subjects on which round-table discussions of the veterinarian's everyday problems will be held.

ZOOLOGY AND ENTOMOLOGY

Four-Year Courses

201-202. Elementary Zoology. An elementary study of all forms of animals, with special reference to the more important economic groups, is given by text-book, library, laboratory, and field work, with supplementary lectures. This course is designed to give the student a general knowledge of the animal kingdom, and to lay the foundation for the special work which follows. Three periods, both terms. Required of all Sophomores in Agriculture. Prerequisite for all other courses in the department. Fee, $2. Professor Metcalf, Assistant Professor Spencer, Mr. Williams.

302. Genetics. A course devoted to a study of the basic principles of cell morphology, cell division, maturation, and fertilization as a basis for the study of heredity. In addition to the study of the cell the student will study the various laws of heredity with special reference to Mendel's law. The students will be required to carry on and analyze their own breeding experiments with fruit flies, and to observe and analyze the breeding experiments with other animals. Given jointly by the Departments of Zoology and Botany. Prerequisites, Botany 101-102 and Zoology 201-202. Three periods, second term. Required of all Juniors in Agriculture. Professor Metcalf, Professor Wells.

306. Economic Entomology. The elements of insect anatomy, classification, and development as a foundation for economic entomology is covered by text-book, lectures, and laboratory work, together with systematic study of the injurious insects of farm crops, farm animals, orchard, shade, and ornamental plants, and a study of the insect enemies of the principal truck and garden crops from the standpoint of their life histories and control. Three periods, second term. Elective for Juniors in Agricultural Chemistry. Required of all other Juniors, except students in Veterinary Medicine. Professor Metcalf, Assistant Professor Spencer.

303-304. Comparative Anatomy. This course will be devoted to a study of the comparative anatomy of typical vertebrates. System of organs will be studied in the various classes and the development and interrelation pointed out. Three periods, both terms. Required of Juniors in Biology. Professor METCALF.

307-308. Economic Zoology. A study of the principal groups of animals in their relation to man, both from the standpoint of crops destroyed and diseases carried. Three periods, both terms. Elective for all Juniors in Agriculture, except those in Agricultural Chemistry and Veterinary Medicine. Professor METCALF.

401-402. Vertebrate Embryology. This course will cover the comparative embryology of the principal groups of vertebrates, together with a discussion of the comparative anatomy of the vertebrates. Three periods, first term. Required of Seniors in Biology. Three periods, second term. Required of Seniors in Veterinary Medicine. Elective for all other Seniors in Agriculture. Fee, $2. Professor METCALF.

403-404. Apiculture. The first term will be devoted to a study of the life history and anatomy of the honey bee and preparation of hives for wintering. The second term will be devoted to spring management, comb and extracted honey production. Three periods, second term. Required of Seniors in Biology. Three periods, either term. Elective for all other Seniors in Agriculture. Professor METCALF, Assistant Professor SPENCER.

405-406. Rural Sanitation. A course in which the relation between animals, especially insects, and sanitation of the farm and farm home are discussed. These discussions embrace the methods of disease transmission and spread by insects, and through foods and water; air and ventilation; sewage and refuse disposal; the transfer of disease through careless insanitary methods; disinfection and quarantine; sanitation of summer camps; schools and other community units; industrial and occupational hygiene; rural and urban conditions; vital statistics and health education. One period, both terms. Elective for all Seniors in Agriculture, except Veterinary students. First term, Professor METCALF; second term, Dr. KAUPP.

407. Scientific Illustrating. A course in the various methods of illustrating, with special reference to their use by the biologist. The student is drilled in the fundamental importance of the outline, of color, of composition, and of perspective. The student may then elect to study any of the following methods of finishing drawings: pen and ink, pencil, charcoal, wash, water color, and oil color. Chart making, casting, modeling, and wax plate reconstruction are also considered. Three periods, first term. Elective for Seniors in Agriculture. Professor METCALF.

408. Scientific Photography. This is a course that emphasizes the importance of photography in science. Exposure, composition, the preparation of the negative for printing, printing, enlarging, making lantern slides, and color photography are all considered. Three periods, second term. Elective for Seniors in Agriculture. Professor METCALF.

501-502. Graduate Zoology. This course is designed to fit the student for research or teaching in either Zoology or Entomology. The student may elect from the following groups: (1) Invertebrate Morphology; (2) Comparative Anatomy; (3) Vertebrate Embryology; (4) Invertebrate Embryology; (5) Ecology; (6) Animal Micrology; (7) Cytology; (8) Systematic Entomology; (9) Medical and Veterinary Entomology; (10) Parasitology; (11) Economic Entomology of fruit trees, shade trees, greenhouse, corn, cotton, or tobacco. Four or eight periods. Professor METCALF.

Short Courses

11-12. Animal Life. A course designed for the two-year student in which the fundamental facts of animal structures and animal activities are presented, as a basis for further work in the specialized courses in animal feeding, animal husbandry, and poultry. Special emphasis will be laid on such important activities of the body as circulation, digestion, excretion, and reproduction, which will be considered from the standpoint of animal breeding. The economic importance of birds, rats and mice, and other animals, especially those which carry or cause human or animal diseases, will be examined and studied in the laboratory. Three periods, both terms, first year. Professor METCALF, Mr. SPENCER, and Mr. WILLIAMS.

21. Farm Insects. This is a short course in which the beneficial and injurious insects are discussed in their relations to the farm. The various insecticides and methods of spraying are also included. Three periods, first term, second year.

Insects. The aim of this course will be to teach a farmer to recognize his insect friends and enemies. We pay a much greater tax to insects each year than we do to the State and local government in taxes for several years, and yet there are many farmers who know practically nothing about insects. The farmer should know something about the lives of these interesting animals and how to control the injurious forms.

The course will be illustrated by specimens, charts, and photographs, in order to familiarize the farmer with the principal insects attacking farm crops and fruit trees.

RULES FOR ADVANCED DEGREES

Two degrees are conferred: The Engineering Degree to nonresident graduates of the engineering courses, and Master of Science to resident students pursuing graduate work.

ENGINEERING DEGREES

1. The degree of Civil Engineer, Mechanical Engineer, or Electrical Engineer may be conferred upon graduates of the several engineering departments of the College not sooner than three years after graduation.

2. Each candidate for an engineering degree must file his application for enrollment not later than October 5.

3. He must file with his application a statement of the work he has done since graduation and the title of the thesis which he will present.

4. The record of the work and the subject of the thesis must be approved by the Faculty's standing committee on graduate studies before the applicant will be enrolled as a candidate for a degree.

5. No work done as a teacher shall be credited towards this degree.

6. The completed thesis must be submitted in approved form not later than May 1. Reports, designs, or drawings made in the regular course of his employment will not be accepted.

7. A candidate must submit with his thesis tangible records of the work he has done and upon which his application for the degree is based, such records to consist of complete drawings, detailed drawings, photographs, records of tests, or other such matter as will show the character of the work done and indicate the degree of responsibility that has been placed upon him.

8. If the record of the work done be approved and the thesis accepted by the Faculty, the candidate, upon notification, must present himself for examination not later than the Saturday preceding the annual commencement. The examination shall consist of oral questions on the subject-matter of the thesis and on the work done by the candidate since graduation.

MASTER OF SCIENCE

The degree of Master of Science will be conferred on graduate students who fulfill the following requirements:

1. The candidate must have received the Bachelor's degree from this College or another institution having an equivalent course of study.

2. Not less than two years must intervene between the conferring of the Bachelor's degree and the Master's degree, unless the candidate has devoted his time exclusively to graduate study.

3. A course of study consisting of one major and two minors, aggregating sixteen periods, must be pursued during residence at the College, each period representing not less than 90 hours of actual work.

4. The major subject, covering eight periods, shall be strictly graduate work and selected in that department in which the Bachelor's degree was taken.

5. The two minor subjects, covering four periods each, shall be chosen from departments allied to the department in which the major subject is chosen. The work of a minor subject shall be of a grade not lower than that of the Junior year in those departments.

6. Work which has been done previous to receiving the Bachelor's degree or which has been accepted as credit towards any degree received shall not be accepted for credit towards the Master's degree at this College.

7. The major and minor subjects must be completed satisfactorily by May 1st preceding the conferring of the degree, at which time also must be presented in its complete form a satisfactory thesis, the theme of which must have been approved by the 5th day of October previous thereto.

8. The candidate must pass a satisfactory oral examination upon his thesis, major and minor subjects, before an examining committee composed of the professors in charge of the major and minor subjects, one or more members of the Graduate Studies Committee, and one or more other members of the Faculty, said examining committee to be appointed by the Faculty upon the nomination of the Graduate Studies Committee.

9. In case the applicant be employed by the College, Experiment Station, or State Department of Agriculture, he shall not be allowed to receive during any term credit for more than four periods, to be distributed as follows: one minor, or half a major, or half a minor and one-fourth of a major.

10. No work done as a teacher shall be credited as work towards the degree.

11. At least eight periods must be devoted to work in the laboratory, field, greenhouse, dairy, or barn.

12. The thesis must involve some original work. References to literature should as far as possible be to original sources, and all citations should follow the rules prescribed for the *Journal of Agricultural Research.*

13. Candidates for advanced degrees shall comply with the regular registration rules for undergraduates, and must register for each term for which they wish to receive credit.

14. In no case will credit be allowed for the fall term unless the candidate shall have filed with the Registrar an approved course of

study by October 5. In no case will credit be allowed for the spring term unless the candidate shall have filed with the Registrar an approved course of study by February 5.

FORM OF THESIS

The thesis must be presented on unruled white paper, 8⅛ by 11 inches in size, twenty-pound Persian bond or the equivalent. A suitable title-page, printed or typewritten, must be prepared. The thesis must be neatly typewritten, properly paged, leaving a margin of 1½ inches on the left for binding, the writing to be on one side of the page only. All drawings or diagrams must be neatly and carefully prepared, and where the size of paper necessary is larger than that of the page it must be of such size as conveniently to fold in with the thesis.

The thesis shall become the property of the College and will be placed on file.

PUBLICATION OF THESIS

Theses for advanced degrees or extracts therefrom may be published only under the supervision of the Graduate Studies Committee, which committee will decide upon the place of publication and matter to be published. In connection with the publication there is to appear the following statement, or words to that effect: "Extracts from the thesis submitted to the Faculty of the North Carolina State College of Agriculture and Engineering in partial fulfillment of the requirements for the degree of ....." Acknowledgment may be made in the body of the thesis for assistance rendered, or the article may appear as a joint publication with some member of the Faculty should facts justify the same.

SUMMER SCHOOL

The seventh session of the Summer School will begin on June 14 and continue through July 27, 1921. June 14 will be devoted to registration, and July 27 to final examinations. The State teachers' examinations will be held at the school on Thursday and Friday, July 28 and 29.

Various classes of courses are given during the summer time—namely, State Summer School courses, County Summer School courses, Vocational Agricultural courses, College Entrance courses, College Credit courses, Demonstration School courses, and Rehabilitation courses.

The State Summer School. The State Summer School is for graduates of standard high schools and teachers who hold a One-year Temporary Certificate or any higher certificate. It is also open to teachers holding a Provisional A certificate, secured on the basis of graduation from a standard high school, and to teachers holding an Elementary Term Certificate with no renewal credit.

These courses are so arranged that by taking them (1) graduates of standard high schools and holders of Provisional A and One-year Temporary certificates issued under conditions may receive credit which will entitle them to elementary certificates; (2) holders of elementary certificates may raise their grade to primary or grammar grade certificates; and (3) holders of high school certificates may raise the grade of their certificate.

There are courses for city and county superintendents, principals, and supervisors.

Superintendent E. L. Best of the Franklin County Schools will supervise the State Summer School courses.

Four sessions' attendance at this State Summer School will give credit equivalent to one year of college work.

The County Summer School. The County Summer School is intended for all prospective teachers who are not graduates of county high schools, and for holders of the following: (1) Second Grade Certificate; (2) Provisional B; (3) Provisional A, issued on the basis of credits from a summer school and credit on two groups of academic subjects by State examination; (4) Provisional A, issued on the basis of credits on three groups of subjects by State examination and no summer school credits; (5) Teachers' Permit.

Superintendent John C. Lockhart of the Wake County Schools will supervise the County Summer School courses.

The Demonstration School. The Demonstration School is intended for first, second, fourth, and fifth grades. The number of

children admitted is limited to fifteen for each grade. There will be no charge for tuition fees, but the children will be expected to provide themselves with the necessary books and other materials.

The Demonstration School is established for the benefit of the members of the State Summer School. Those who wish credit for Demonstration School attendance must be present at such times and perform such duties as may be assigned by the Demonstration School teacher.

It is planned for the Demonstration School teachers to arrange so that this work shall correlate with and be of the greatest benefit to those who are attending the courses in methods.

Selection and Arrangement of Courses. The Summer School Catalog may be obtained upon application to the Director of the school. It contains a list of the subjects which will be presented during the session of the school. It shows also the hours at which each subject will be presented. Those expecting to attend the school are advised to select and arrange their courses, as nearly as possible, before reaching Raleigh. They are specially urged to confer with their principals or superintendents, who may advise them. A representative of the State Department of Education, Superintendent Best, and Superintendent Lockhart will have regular times for conferences with reference to the courses contemplated by members of the school. While they will render this service with the greatest pleasure, it is very much better for the pupil to have the course planned in advance.

Vocational Agricultural Courses. These courses will be under the direct supervision of Professor L. E. Cook.

College Entrance Courses. The College Entrance courses are open only to those who have completed the third year of high school work and have been enrolled in, but have not completed, the fourth year. These courses are for those who are slightly deficient in one or two subjects in meeting the requirements for College Entrance. About one unit may be made up during the Summer School session. Pupils who wish to take College Entrance courses are urged to write to the Director in advance for the necessary blanks. When filled out and returned, these blanks will be examined and the applicant will be informed as to whether he or she will be admitted to the school. Candidates for College Entrance are urged not to come to the school until this requirement has been complied with. Dean Thomas P. Harrison of the College will supervise the College Entrance courses.

College Credit Courses. The College Credit courses are open to young men and young women who have previously been enrolled in a college. These courses are arranged so that credit for some Freshman courses may be obtained. Prospective students are urged

to apply to the school for the necessary blanks. When these blanks are filled out and returned to the school the applicant will be informed as to whether he or she will be admitted to the school. Candidates for College Credit are urged not to come to the school until this requirement has been complied with. Dean Thomas P. Harrison will supervise the courses for College Credit.

Rehabilitation Courses. These courses are intended for returned soldiers who have been wounded. They are under the charge of the United States Vocational Educational Board, with headquarters in Atlanta.

Others Who May Benefit by the School Courses. The Primary and Grammar Grade courses are limited to teachers and prospective teachers, and those of the Demonstration School to children, but the High School and Professional Educational courses which are given offer splendid opportunity for study to the ladies of Raleigh and elsewhere. An examination of the school catalog, which is available upon application, will show a wealth of cultural courses which will prove both pleasant and profitable.

The Nineteen-Eleven, South, and new dormitories will be reserved for ladies exclusively, and will be in charge of chaperons who will at all times be glad to advise and assist those who are under their care. Watauga Hall will be reserved for men.

The Y. M. C. A. building will be the social and recreational center of the school. This building contains a reading room, an auditorium, several reception rooms, bowling alleys, a gymnasium with modern equipment, and a swimming pool, besides a limited number of sleeping rooms.

Colonel Fred A. Olds will personally conduct excursions each Saturday to the many points of interest in Raleigh and its environs.

The recreational features of the school life will be emphasized. All will have an opportunity to participate in games, community singing, and entertainments, and to take part in story-telling circles which will be held upon the campus in front of Holladay Hall several evenings a week immediately after supper. Motion pictures will be shown at the Y. M. C. A. Entertainments of interesting and instructive nature will be given on July 4 and at the end of the session. Lectures will be given comprising a wide range of educational and cultural subjects.

Members of the Summer School will have access to the College Library and to the Raney Library and State Library for reference work.

The College infirmary, in charge of the hospital matron, will be conducted for the school. The College physician will make daily visits to those who may be sick in the infirmary.

The Teachers' Bureau will, without charge, assist school officials to secure teachers and members of the school to find positions. In other words, the function of the Teachers' Bureau will be to bring the position and the applicant together.

The expenses of the school will be moderate, and a statement of them will be found below. Every cent paid in by student will go toward defraying the expenses of the school, and, in addition thereto, the State will contribute an amount equivalent to from two to three dollars for every dollar paid by the student.

During the 1920 session there was an enrollment of 450 teachers, 42 candidates for College Entrance and College Credit, 34 boys and girls in the Demonstration School, 122 Rehabilitation students, and 23 Home-makers, making a total of 671. This was a gain of 197 over the previous session.

Of the 450 teachers, 385 were enrolled in the State School and 65 in the County School. Three hundred and fifty-one teachers in the State School were high school and elementary teachers, and 34 were teachers of Vocational Agriculture.

Eighty-six North Carolina counties were represented. There were students from 8 States. There were 195 men, 442 women, 19 boys and 15 girls.

The first session of the school was held in 1903, during the presidency of Dr. George T. Winston, the registration being 338. The second session, in 1904, was under the directorship of Dr. J. Y. Joyner, and the attendance reached 840. There were no sessions of the school from 1905 to 1916 inclusive. In 1917 the enrollment was 517, and in 1918, 558. In addition to these figures, 14 soldiers were enrolled in French during the 1917 session, and 98 during the 1918 session. In 1919 the enrollment was 281 teachers, 22 candidates for College Entrance and College Credit, 20 boys and girls in the Demonstration School, and 151 others, making a total of 474.

Fees and Expenses

The expenses for the entire six weeks session will be as follows:

Tuition	$10.00
Room rent, each (two in a room)	6.00
Board	30.00
	$46.00

There will be a key deposit of 25 cents, which amount will be refunded when the key is returned. In some of the classes there will be a small fee to cover the cost of materials, which will be designated in the description of the course.

In a limited number of cases one may be able to room alone on payment of $9 room rent.

All fees and charges are payable in advance, and there will be no refund of fees or charges after the first ten days.

The Summer School will be able to give dining-room positions to several young women who will be members of the school. About three hours daily for alternate weeks will be required for each one selected for this work. The compensation for the six weeks session will be $15 each. Applications for these positions should be filed with the director at once.

Many of the homes in Raleigh will supply board and lodging. A list of these will be furnished upon application.

For catalog or other information regarding the school, apply to

W. A. WITHERS, *Director*,
Rooms 215-217, Winston Hall,
State College Station, Raleigh, N. C.

SUMMER SCHOOL STUDENTS—1920

COLLEGE ENTRANCE

Name	*Postoffice*
Patsy Tillery Allen	Raleigh
Nina Evelyn Ayers	Rowland
Godfrey Hand Browne	West Raleigh
Virginia Bryant	Wallace
Julius Joslin Chamberlain	Raleigh
Elbert Daniel Cody	Misenheimer
William A. Cooper	Raleigh
Julia Sanford Davis	Raleigh
William Jackson Early	Aulander
Charles Bryan Graham	Candor
Harvey A. Hughes	Trenton, N. J.
Nan Kathleen Hunter	Raleigh
James Carl Jones	Raleigh, R. 1
Peter Hines Jones	Raleigh, R. 1
Kendall Peter McDuffee	Raleigh
Lucy Martin	Polkton
Lawrence Matteson	Raleigh
Chauncey Munger Nelson	Maysville
Hal Aycock Oliver	Marietta
Marie Louise Shore	Raleigh
William W. Smith	Raleigh
William Walton Studdert	Washington
Eugene Sturdevant Wilson	Raleigh
Mary E. Womble	Cary
John Bryan Wright, Jr.	Raleigh
Mary Yarborough	Raleigh

COLLEGE CREDIT

Oscar Dixon Baxter	Raleigh
Brocknel Arthur Benfield	Crossnore
Thomas Wayne Bridges	Mooresboro
Charles Ormonde Butler	Wilmington
William LeRoy Crosby	Asheville
William Claude Ferguson	Vass, R. 1
Selma Fountain	Raleigh
Mary Wetherell Gorman	Raleigh
Elizabeth Hudson	Raleigh
Bartholomew Figures Moore	Raleigh
George David Newton	Hope Mills
Thomas Kesler Roberts	Red Springs

Name	*Postoffice*
John Perry Ryals	Raleigh
Royal Clementine Stephenson	Raleigh
Lula Stockard	Raleigh
Albert Humphrey Tompkins	Newnan, Ga.

TEACHERS, VOCATIONAL AGRICULTURE

Walter D. Barbee	Seaboard
James Kirk Coggin	New London, R. 2
Edwin E. Connor	Fairview
Williamson Lee Cooper, Jr.	Graham
Arthur Foster Corbin	Campobello, S. C., R. 4
Thomas Philmore Dellinger	Crossnore
Coffee Harlan Gryder	Hiddenite
Fred Bryan Harton	Flat Rock
Edward Gibbon Hobbs	Clinton
Robert Henry Hutchison	Snow Camp
Eugene Carl Jernigan	Benson
Robert Hamilton Lankford	Harmony
Howard H. McKeown	Roxboro
Edward Newton Meekins	Manteo
Paul H. Nance	Bonlee
Francis Alexander Penland	Barnardsville
Charles Anthony Sheffield	Randleman
Dennis Howard Sutton	Columbia
Earl Parker Welch	Charlotte, R. 7
Alpheus Folger Zachary	Bahama

TEACHERS, AGRICULTURAL

J. Wilson Bason	Vass
George Cleveland Buck	Salemburg
Harley Wilson Bullard	Aulander
Andrew J. Caldwell	Red Springs
Harper Nicholson Cherry	Vanceboro
Hugh Woody Dixon	Elkin
John Stewart Howard	Salemburg
William Jesse Isbell	Newton
Omra Burr Jones	China Grove
George Oliver McBroom	Harmony
Daniel Ernest Roberts	Rich Square
Marion Polk Sanford	Middleburg
Arthur Lee Teachey	Pleasant Garden
Nathaniel Warren Weldon	Stovall

TEACHERS, STATE SCHOOL

Name	*Postoffice*
May Adams	Holly Springs
Allie Adcock	Berea
Pauline Alexander	Charlotte, R. 1
Pearle L. Allen	Raleigh
Jennie C. Alston	Inez
Eva Gladys Ange	Jamesville
Della Arnold	Hamptonville
Maude Bagwell	West Raleigh
Blanche Baily	Smithfield
Lena Bailey	Woodsdale
Cora Belle Ballard	Alexis
Kate Ballard	Louisburg
Bessie Barnes	Lucama
Lela Bass	Clinton
Pattie Viola Battle	Pee Dee
Ethel Baugh	West Raleigh
Hattie Evelyn Bazemore	Ahoskie
Bertha Beasley	Edenton
Sallie H. Benson	Nashville
Sallie Betts	Greensboro
Vida Betts	Fuquay Springs
Mary Black	Carthage
Fannie Pearl Blackman	Goldston
Daisy Bland	Sanford
Rose Bland	Sanford
Lucy Bobbitt	Franklinton
Eugenia Boone	Castalia
Lois Boone	Wilmington
May Pressly Bostick	Laurinburg
Margaret Bowen	Lillington
Gladys Brantley	Spring Hope
Lula B. Brantley	Spring Hope
Sallie Braswell	Nashville
Blennie Brewer	Eagle Springs
Etta Bridges	Wakefield
Maie Bridges	Forest City
Urma W. Britt	Enfield
Kiva Broadwell	Wendell
Birdie Brooks	South Boston, Va.
Sallie Brooks	South Boston, Va.
Clyde Brown	Wendell
Lerlene Brown	Wendell
Beulah Bryan	Garner

Name	*Postoffice*
Myrtle Burgess	Moyock
Cammie Burnett	Burgaw
Mabel Burt	Buies Creek
Clara Cameron	Jonesboro, R. 1
Louise Campbell	Carthage
Eloise Cannady	Oxford
Leyta Carter	Nashville
Selma Chaney	Wingate
Cornelia Cheek	Ore Hill
Lucille M. Cheek	Ore Hill
Jessie Chitty	Murfreesboro
Minnie E. Coble	Burlington
Lizzie E. Cole	Sanford
Georgia Conley	Sevier
Ernest W. Constable	Lake Landing
Carrie Cox	Richlands
Beulah Cranford	Salisbury
Annie B. Crowell	Indian Trail
Kate Crowell	Indian Trail
Beulah Cyrus	Louisburg
Bertie Daniel	Youngsville
Ida Dark	Siler City
Lula Davenport	Rockford
Eva C. Davis	Creek
Lossie Davis	Lucama
Onie Virginia Davis	Lucama
Pearle Davis	Leechville
Sallie Loue Davis	Raleigh, R. 4
Maude Dawson	Forest City
Retha Deans	Pikeville, R. 2
B. F. DeLoatch	Morrisville
Mrs. B. F. DeLoatch	Morrisville
Charles R. Doby	Newsom
Pattie S. Dowell	Raleigh
Nettie Dozier	Conyock
Arnie Lee Duke	Arcola
Lila C. Duke	Blackstock, S. C.
Mabel Clair Duke	Nashville
Carrie B. Dunn	Wise
Emma L. Dunn	Wise
Mrs. Alvah Early	Aulander
Tina Early	Aulander
Louise Eaton	Thomasville
Eva Edgerton	Holly Springs

Name	*Postoffice*
Annie Elliott	West Durham, R. 1
Rosa Elliott	West Durham, R. 1
Dona Ennis	Duke, R. 2
Hettie Mae Ennis	Duke, R. 2
Ethel Ervin	Troutmans
Jessie Farrabow	Stem
Hester P. Farrior	Raleigh
Minnie Bryan Farrior	Raleigh, R. 4
Etta Fleming	Manson
Clemmie Flowe	Allen
Alma Floyd	Fairmont
Roberta Floyd	Fairmont
Lessie Foster	Louisburg, R. 6
E. Lee Fox	Inman
Minnie L. Franklin	Raleigh
Irene Freeman	Charlotte, R. 4
Janie Futrelle	Conway
Kate M. Gainey	Clinton
Mattie L. Gainey	Clinton
Janie Garrett	Warsaw
Stella Garrett	Warsaw
Stella Gentry	Glade Valley
Kathleen Gibson	Ruffin
Helen E. Gillam	Windsor
Katherine Gillam	Windsor
Florence Gladden	Sanford
Tera Godwin	Dunn
Belle Graham	Raeford
Mary Graham	Candor
Pauline Grainger	Wilson
Minnie G. Gray	Windsor
Robert D. Gray	Ruth
Mrs. Robert D. Gray	Ruth
Betty Green	Wadeville
Lola Griffin	Wingate
Sallie Griffin	Wingate
E. Carrie Hall	Portland, Maine
Bessie Harper	Spring Hope
Belle Harris	Mountain View
Eva Harris	Roxboro
Grace Harris	Bunn
Irene Harris	Newell
Jennie E. Harris	Wilkesboro
Lillian Harris	Roxboro

Name	*Postoffice*
Mary Harris	Louisburg
Musa Harris	Louisburg, R. 1
Nettie L. Harris	Roxboro
Sudie Harton	Spindale
Louise Hartsfield	Wake Forest
Alice B. Hatcher	Brim
Susie Hayes	Louisburg
Nancy Helms	Monroe
Natalie Henry	Tarboro
Mary Belle Herring	Raleigh
Vertie Mae Herring	Roseboro
Stella Hicks	Wise
Margaret Highsmith	Raleigh
Lenora Hipp	Charlotte, R. 5
Walter Hogan	Ellerbe
Ruth Holliday	Jamesville
Myrtle Marvin Holmes	Youngsville
Mattie Hood	Charlotte, R. 8
Malissa Hoover	Old Fort
Albert Thompson Hord	Cary
Mrs. C. G. Horton	Raleigh
Margaret A. Hudson	Waxhaw
Emma P. Hunter	Matthews
Sarah Hyatt	Polkton
Janie Ipock	Goldsboro
Ines Iris	Bayboro
Bertha Isley	Burlington, R. 1
Clyde Jennings	Olin
Katie Black Johnson	Milwaukee
Lillian Johnson	Lillington
Lucille Johnson	Ingold
Maude E. Johnson	Rose Hill
Alma Jones	Raleigh, R. 4
Elizabeth M. Jones	Raleigh, R. 1
Esther L. Jones	Oxford
Evangeline Jones	Wendell
Julia Jones	Raleigh
Lena Marian Jones	South Mills
Lethia May Jones	Raleigh
Rena Jones	Swansboro
Thelma Jones	Neuse
Alma Keith	Northside
Margaret Keith	Vass
Linnie Kendrick	Cherryville

Name	*Postoffice*
Mrs. Annie W. Killian	Raleigh
Arline Kimball	Townsville
Lily Kimball	Townsville
Mamie Love Kimball	Townsville
Pela H. Kimball	Townsville
Helen Kirkpatrick	Charlotte, R. 2
Lucy Kiser	Kings Mountain
Irene Kornegay	Faison
Eunice Krause	Belhaven
Estelle Lamm	Lucama
Pattie B. Lamm	Mapleville
Maude Lancaster	Castalia
Olive Lang	Gates
Maye Langley	Wilson
Vallie Mae Lawrence	Jonesboro
Mrs. Jonah Leach	Star
Fannie Lee	Dunn
Lucile Leggett	Scotland Neck
Sudie Leonard	Tomahawk
Fielding Lewis	Charlotte
Gladys Lewis	Rutherfordton
Ola S. Long	Morehead City
Mrs. Frances Lucas	Bell Arthur
Vera Lunsford	Roxboro
Iola Lyon	Northside
Mrs. Carrie McCauley	Nashville, R. 4
Mrs. Portia McClenaghen	Raleigh
Miriam McEachern	Wilmington
Mrs. M. J. McFarland	Mebane
Mary Ellen McIntosh	Sanford
Kate McKay	Lillington
Ada McKenzie	Carthage
Margaret McKenzie	Carthage
Mrs. H. H. McKeown	Roxboro
Christian McKethan	Fayetteville, R. 4
Ida McKethan	Fayetteville, R. 4
Mrs. C. E. McLean	Wendell
Martha McLeod	Buie
Lillian Massenburg	Louisburg
Louise Maynard	Apex
Lucetta Midgette	Manteo
Kate Mills	Rocky Mount, Va.
Thelma Mitchell	Winton
Tullie G. Mitchell	Garner

Name	*Postoffice*
Zula Clyde Mitchell	Youngsville
Mary Montague	Woodsdale
Mary Moon	Franklinville
Bessie Morris	Stanley
Onie V. Moseley	Kinston
Elbert M. Neel	Charlotte, R. 11
Marion Lee Newman	Elon College
Revah Newton	Orrum
Ellie Nicholson	Macon
Irene Nixon	Topsail
Flossie Nobles	Middlesex
Beulah Norment	Trinity
Lucile Norris	Wakefield, Va.
Anna Norton	Hickory
Ava Eleanor Olive	Dunn
Ruth Owen	Clarksville, Va.
Magnolia Owens	Columbia
Mary A. Page	Raleigh
Annie Parker	Monroe, R. 1
Annie Pearl Parker	Youngsville
Bessie Lee Paylor	Roxboro
Caddie Peele	Williamston
Myrtle Peele	Williamston
Mrs. E. O. Penny	Wake Forest
Mae B. Perry	Louisburg
Gladys Pierce	Colerain
Dorothy E. Pike	Enfield
Mae Pleasants	Cary
Karen E. Poole	Clayton
Alice Lee Pope	Raleigh, R. 4
Clara Pope	Scotland Neck
Sadie Pope	Scotland Neck
Maude Porter	Hillsboro
Mrs. W. H. Pridgen	Elm City
Magnolia Pullen	Spring Hope
Georgianna Ray	Wakefield
Helen L. Read	Palmer Springs, Va.
Annie Rector	Edwards Cross Roads
Ethel Reece	Boonville
Lucy M. Reeks	Macon
Mrs. S. S. Reeks	Macon
Florence Reid	Drexel
Louise Reid	Drexel
Rebecca A. Reid	Statesville

Name	*Postoffice*
Elsie Stewart Respess	Pantego
Beula Rhyne	Mount Holly
Bertha Riley	Wilson
Margaret Robinson	Charlotte, R. 7
Camille Roddey	Rock Hill, S. C.
Neal Mary Roseman	Lincolnton
Effie Rouse	Rose Hill
Mrs. J. A. Sandling	Youngsville
Blanche Satterthwaite	Ransomville
Mattie Saunders	Tyner
Mrs. H. V. Scarborough	Macon
Mrs. Carrie Schweikert	Goldsboro
Louise Scott	Raleigh
Ora Scott	Ramseur
Clara Seymore	Bunn
S. Ashton Sharpe	Burlington, R. 7
Cora Hill Shaw	Macon
Margaret Shaw	Jonesboro, R. 1
Susan Shaw	Macon
Mrs. W. W. Shay	Raleigh
Nell W. Shellem	Stanley
Daisy Simpson	Wilson, R. 3
Annie Smaw	Raleigh
Louise Smaw	Raleigh
Anna Mignon Smith	Spartanburg, S. C., R. 4
Carrie Smith	Charlotte, R. 5
Helena Edmonds Smith	Raleigh
Kathleen Smith	Pink Hill
Lillian Smith	Pink Hill
Pattie Lou Smith	Rocky Mount
Anna Elizabeth Spain	Greenville
Rennie Spivey	Greensboro
Adelia Spruill	Creswell
Beula Stallings	Bunn
Valmore Lucille Stallings	Wakefield
Gertrude Lee Stanfield	Mebane
Carrie Starnes	Granite Falls
Kate Starnes	Granite Falls
Marjorie L. Steele	Lumberton
Naomi O. Stewart	Coats
Lossie B. Stone	Apex
Lottie Stroup	Stanley
Thelma Tapp	Roxboro
Lillian Taylor	Gumberry

Name	*Postoffice*
Maggie Lee Taylor	Nashville, R. 3
Mary Theresa Taylor	Rutherfordton
Ora Taylor	Raleigh, R. 4
Catherine Templeton	Holly Springs
Mary P. Thomas	Cofield
Mrs. Louis Thorp	Berea
Mary Tiddy	Red Springs
Blanche Tillman	Cary, R. 2
Leona Tolson	Croatan
Helen Tomlinson	Smithfield
Elise Townsend	Wilson
Hattie Thomas Turner	Rougemont
Ruth Tyler	Roxobel
Katie Underwood	Carthage
Maude Utley	Newell
Ada Valentine	Spring Hope
Gladys Wallace	Elm City
Mrs. A. D. Walters	Cooleemee
Verla Mae Walters	Monroe
Ophelia Warren	Ellenboro
Mary Washburn	Rutherfordton
Janet Weatherspoon	Sanford
Mary Whitehurst	Morehead City
Sudie Whitener	Stanley
Bessie Williams	Drum Hill
Etta Williams	Linden
Julia Williams	Ringwood
Mrs. M. E. Williams	Louisburg
Mary Williams	Drum Hill
Olie Williams	Wake Forest
Zura Williams	Wake Forest
Nell Wilson	Goldsboro
Mrs. R. B. Wilson	Raleigh
Ethel Winstead	Roxboro
Gertrude E. Winston	Youngsville
Mrs. Eustace L. Womble	Raleigh
Clida Woodall	Cardenas
Bertha Woodard	Selma
Myrtle Woodard	Cary, R. 2
Fannie Woodward	Warsaw
Elizabeth Woody	Woodsdale
Marie Woody	Woodsdale
Bessie Worley	Pink Hill
Lelia Bunn Yarbrough	Spring Hope

TEACHERS, COUNTY SCHOOL

Name	*Postoffice*
Fannie Adams	Willow Springs
Lucille Allen	Neuse
Callie Barnes	Creswell
Mattie Beasley	Edenton
Eleanor Blackley	Franklinton
Mary Ella Blackley	Kittrell
Effie Mae Blanchard	Burgaw
Nora Wilson Bradford	Huntersville
Lelia Breedlove	Franklinton
Clyde Cameron	Jonesboro
Hazel Crabtree	Gibsonville
Mirtie Crawley	Raeford
Lillie Davis	Mamers
Myrtle Lou Dixon	Rose Hill
Susie F. Fish	Willow Springs
Mary Fleetwood	Severn
Lerma Godwin	Benson
Edna B. Greene	Zebulon
Minnie Greene	Oxford
Ora Lee Greene	Lillington
Leone Gresham	Beulaville
Ballard Harper	Nashville
Florence Harris	Mountain View
Ruth Harris	Hurdle Mills
Annie B. Holland	Selma
Virginia O. Johnson	Rose Hill
Lillian Jourdan	Merry Oaks
Mary Justice	Charlotte
Maggie Luper	Sharpsburg
Elizabeth Hazel Lyon	Neuse
Sallie Giles Lyon	Neuse
Mollie McKenzie	Carthage
Catherine McLeod	Matthews
Mary McRae	Peachland
Kate Marley	Franklinville
Nettie Beulah Moon	Franklinville
Lucy Moore	Bunn
Ruth S. Neal	Danville, Va.
Annie D. Noble	Deep Run
Allys Oakley	Boonville
Myrtle Oakley	Boonville
Annie O'Briant	Elm City
Lella B. Overton	Kittrell
Thelma Parker	Garysburg

Name	*Postoffice*
E. Dora Phelps	Creswell
Allie M. Pruitte	Franklinton
Kathleen Rogers	Rose Hill
Pearle Rogers	Crabtree
Bertha Rosser	Jonesboro
Beulah Rosser	Jonesboro
Alva B. Smith	Harmony
Geneal Summer Smith	Huntersville
Mary A. Stewart	Coats
Carrie B. Stroud	Pink Hill
Ercie Stroup	Stanley
Burlah Sturdivant	Castalia
Annie Taylor	Pink Hill
Clara Thomas	Vass
Esther Ward	Wallace
Gertrude Ward	Tyner
Elsie Weaver	Pinetops
Katie Bet White	Zebulon
Eleanor E. Wilder	Franklinton
Ozelle Woodley	Creswell
Cora Woodruff	Boonville

DEMONSTRATION SCHOOL

Second and Third Grades

Herbert Carroll, Jr.	Raleigh
Dorothy Evelyn Cook	Raleigh
Violet Crom	Raleigh
Aulick Cullins	Raleigh
William DeLoatch	Morrisville
Marguerite Dunn	Raleigh
Flora Harris	Raleigh
Nell Hay	Raleigh
Charles Philip Horton	Raleigh
Charles Hulvey	West Raleigh
Marguerite Lynde	Raleigh
Gwendolyn Parish	Raleigh
Gladys Poole	Raleigh
Sorsby Renfrow	Raleigh
Alice Tossell	Raleigh
Beecher Williams	Raleigh
John Pescud Withers	West Raleigh
William Alphonso Withers, Jr.	West Raleigh

Fourth and Fifth Grades

Name	*Postoffice*
Ralph Ivey Baines	Middlesex
Manley Baker	Raleigh
Conway Blackwood	Raleigh
Thomas Bowden	Raleigh
John Philip Cooper	Raleigh
Mildred Emily Cullins	Raleigh
Robert Goodman Davis	Raleigh
Benjamin DeLoatch	Morrisville
Sarah Fussell	Raleigh
Alexander Houston	Raleigh
Mona Horton	Raleigh
Ethel Jones	Raleigh
William Mack Moore	Raleigh
Joseph B. Norman	Raleigh
Flo Parish	Raleigh
Burton Sellers	Raleigh
Mary Laurens Withers	West Raleigh

REHABILITATION STUDENTS

Benjamin Blaine Absher	Austin, R. 1
Avery Columbus Anderson	Lenoir
Jesse Oscar Anthony	Belew Creek, R. 1
George Elam Arney	Lenoir, R. 5
Lewis Slocumb Autry	Autryville, R. 1
Alex. Frank Barbrey	Goldsboro
Bracknel Arthur Benfield	Crossnore
Thomas David Blake	Fairfield
Dyar Columbus Blalock	Timberlake, R. 2
Gerald Raeden Blount	Mackeys
John Elisha Boone	Pittsboro
Hasel Oren Boyd	Goldsboro, R. 4
Isaac M. Bradshaw	Morganton, R. 1
Thomas Branch	Kernersville, R. 4
William N. Brawley	Charlotte, R. 8
Earley Windred Bridges	Wakefield, R. 1
Thomas Wayne Bridges	Mooresboro
Herbert Mitchell Brown	Greensboro, Denim
James Arthur Bruce	Randleman, R. 1
Thomas Newton Bryson	Cullasaja
John Duncan Bullard	Parkton
Ralph Roland Burrows	Allen, R. 1
Joseph Eli Bush	Greensboro, Denim

Name	*Postoffice*
Ernest Fiddillie Capps	Hendersonville, R. 4
Claude Cornelius Cash	Atlanta, Ga.
Jesse Birt Champion	Henderson, R. 6
Benjamin O. Chatham	Fairview, R. 1
John Hoyte Cline	Lawndale
Elbert Daniel Cody	Misenheimer
James Grady Collum	Council, R. 2
John Connor	Fairview
William LeRoy Crosby	Asheville
Thomas Daniels	Culberson, R. 1
Harry Lee Davis	Kinston
William Lee Davis	Carthage
Millard Charles Dawson	Ulah
Pleasant Leroy Kluttz Deaton	Statesville, R. 1
Duncan Jennings Devane	Wilmington
Harry Douglas Doyle	Winston-Salem
Andrew Osbon Eaker	Shelby
Marion Gaston Eaker	High Point
Basil Riggen Ellis	Raleigh
Lieu Derain Ertel	Morrow, Ohio, R. 1
Woodie Eubanks	Lumberton, R. 1
Grady Evans	West Asheville
William Marslender Evett	Blounts Creek, R. 1
William Claude Ferguson	Vass, R. 1
Hoy Lee Fisher	Rockwell, R. 2
Fred Guy Fleming	Creedmoor
Frank James Flynn	Uree, R. 2
Claude Gettys	Hollis, R. 1
Charlie Irvin Gibson	Henderson
John Henry Gill	Henderson, R. 4
Julian Austin Glazener	Calvert
James A. Goodnight	Oakland, Cal.
Eugene Griffin	Raleigh
William Franklin Hackney	Scotland Neck, R. 2
John Marion Hardison	Hope Mills, R. 1
Thomas Alex. Harrington	Broadway, R. 2
Bernie Pope Harris	Henderson
Claude Harris	State Road, R. 2
Claude Edmund Harris	Macon, R. 2
Roe L. Harris	Fairfield
Edward Helms	Monroe
Houston Henderson	Jennings, R. 2
Alvin E. Herman	Catawba
James Edgar Hicks	Marion, R. 1

Name	*Postoffice*
Henry Clay Hobbs	West Durham
Troy Bascom Honeycutt	Oakboro, R. 1
Fred McKinley Hyatt	Weaverville
James Edward Jenkins	Parmele
Ervin Monroe Johnson	Lillington, R. 1
Willie Joines	Amelia
David Loy Jones	Alexis, R. 1
Tillman Washington Jones	Franklin
Isaac Lewis Langley	Barnwell, S. C.
Bennie Edgar Lewis	Zebulon
Glaucus Winer Lewis	Enfield, R. 1
Garland Lloyd	Maysville, R. 2
Lester Farrow McGee	Zebulon
Harvey E. McLaurin	Fayetteville, R. 2
Neill James McMillan	Manchester
Bert Mash	Othello
Romulus Haywood Mason	Scranton
Lorenzo Dowell Massey	Mount Olive, R. 7
Andrew Ashford Mathes	Marion
Ernest Alfred Melin	Stamford, Conn.
Jesse Clyde Merritt	Rose Hill, R. 3
Harlie Abel Miller	Lenoir, R. 2
Elis Fleet Millsaps	Hiddenite, R. 1
Andrew Lee Monroe	Monroe
John Wheeler Moore	Williamston, R. 2
Ransom Davis Mull	Morganton
Samuel Andrew Myers	Thomasville, R. 3
Claud Jones Needham	Old Trap
George David Newton	Hope Mills
Lennie Lester Parker	Maysville, R. 1
Marshall Leak Parsons	Norwood
Herbert Pender	Selma, R. 3
Thamar Espron Propst	Morganton, R. 4
Franklin R. Quinn	West Asheville, R. 3
Emory Lee Ray	State Road, R. 1
James Walter Rollins	Randleman, R. 2
Rufus Frederick Routh	Randleman, R. 2
John Perry Ryals	Benson, R. 2
Edgar Manton Satterthwaite	Ransomville, R. 1
Graham Lane Savage	Clarkton, R. 3
Lucian Roscoe Sherrill	Davidson, R. 2
Thomas Baxter Simpson	Waxhaw, R. 2
Mark Henry Smith	Kannapolis, R. 2
William Mullington Smith	Whiteville, R. 1

Name	*Postoffice*
Kelton Norman Snipes	Marion, R. 1
Isaac Henry Stiwinter	Sewall
John Edgar Sweney	Greensboro, Denim
Vestal Columbus Taylor	Ararat, R. 1
Albert Humphrey Tompkins	Newnan, Ga.
Charles Bernard Torrence	Mount Ulla, R. 2
William Alexander Vaughan	Cumberland
Harvey Walker	Olin
Ulysses Walker	Auburn
Alphonse DeKalb Wallace	Batesburg, S. C., R. 2
John Craford Wadkins	Entwistle
Ballon Mabry Watts	Nakina
Charles Parish Weaver	Durham
Peter Ancell Webb	Winston-Salem
McKinley White	Kinston
John Daniel Will, Jr.	Raleigh
Wiley Hinton Williams	Washington, R. 3
Seward Johnson Wilson	Spray

HOMEMAKERS AND OTHER NON-TEACHERS

Augusta Andrews	Raleigh
Martha Andrews	Raleigh
Jeannette Ball	Raleigh
Lizzie Pullen Belvin	Raleigh
Blanche Bonner	Raleigh
Phyllis Bowen	Raleigh
Rebecca Bowen	Raleigh
Alice Brogden	Raleigh
Cicely Cushman Browne	Raleigh
Katharine Harden	Raleigh
Nancy Belvin Harden	Raleigh
Mary B. Lassiter	Goldsboro
Charlotte Nelson	Raleigh
Mary Nelson	Raleigh
Mrs. Thomas Nelson	Raleigh
Dorothy Pillsbury	Raleigh
Olivia Renfrow	Raleigh
Hannah Renfrow	Raleigh
Eugenia Riddick	Raleigh
Susie May Robbins	Raleigh
Helen Toye	Raleigh
Mrs. Phyllis Spencer	Raleigh
Lillian Waite	Raleigh
Elizabeth Yates	Raleigh

THIRTY-FIRST ANNUAL COMMENCEMENT

MAY 25, 1920

DEGREES CONFERRED

Bachelor of Science

in agriculture

Walter Robert Baynes
Dallas Marion Buchanan
William Carey Bunch
John Summerell Chamberlain
James Kirk Coggin
Cecil Edwards Cooke
Samuel Allen Cooper
Moses Moore Dew
Le Roy Dock
Randall Bennet Etheridge
Edward York Floyd
Thomas Wheeler Hancock, Jr.
Adam Hugh Harris
Fred Bryan Harton
Jesse Meachem Henley
Harry Lee Herman
Edward Gibbon Hobbs
Wilbur Breeden Hodges
Solomon Linn Homewood
Eugene Carl Jernigan
Orma Burr Jones
Harvey Blount Mann
Peyton Howard Massey
Edward Newton Meekins
Graham Clements Monroe
John Thaddeus Monroe
Paul Shepard Oliver
Dwight Hendricks Osborne
Charles Fuller Phillips
Charles Anthony Sheffield
John Guy Stuart
Dennis Howard Sutton
Seth Thomas Walton
Sylvester Hassel Warren
Clarence Westbrook Warrick
Earl Parks Welch
Robert Cleveland Young

in agricultural chemistry

Horace Downs Crockford

in chemical engineering

James Cyrus Black, Jr.
George Maxwell Greenfield
Marion Francis Trice

Bachelor of Engineering

in civil engineering

William Gaston Allen
Wade Vance Baise
John Henry William Bonitz
Franklin Dewey Cline
John Greene Hall, Jr.
Ross Dunford Pillsbury
William Lewis Roach
Ralph Reed Robertson
Frank Pierce Shore
William Nathan Harrel Smith, Jr.
Richard Frazier Tabor

IN ELECTRICAL ENGINEERING

Robert Hobson Duke
William Frank Humbert, Jr.
John Blake Hunter
Melville Lee Matthews
Gratz Brown Millsaps
Robert James Pearsall
James Murchison Peden
Olivar Ramsaur
Caleb Edward Rhodes
Cecil Vann Saunders
Robert Pinkney Stacey
George William Tiencken
Thomas Grady Young

IN MECHANICAL ENGINEERING

Wilburn Clegg Austin
William Clayborne Cheek
Christopher Thomas Hutchins
Frank Lee Lassiter
Tycho Norris Nissen
Albert Linwood White, Jr.
Daniel Barnes Worth

IN TEXTILE ENGINEERING

Bruce Crayton Baker*
Richard Nestus Gurley
Ray Augustus Holshouser
Harry Eley Hood
Alexander Bryan McCormick
Edwin Theodore Porter
Dillard Charles Ragan
Samuel King Wright

*Medaal awarded by National Association of Cotton Manufacturers to B. C. Baker.

ADVANCED DEGREES

Master of Science

course in agriculture

Vernon Ray Herman, B.S.

course in biology

John Henry Williams, A.B.

Civil Engineer

Charles McKee Newcomb, B.E.

Electrical Engineer

McNeely DuBose, B.E.

Mechanical Engineer

William McCormick Neale, B.E. Herbert Lee Taylor, B.E.

Textile Engineer

Thomas Roy Hart, B.E.

Honors in Scholarship

For Four Years

R. D. Pillsbury D. B. Worth

For 1919-1920

senior class

W. V. Baise
J. H. W. Bonitz
J. K. Coggin
H. D. Crockford
G. M. Greenfield
W. F. Humbert, Jr.
R. D. Pillsbury
F. P. Shore
M. F. Trice
D. B. Worth

junior class

R. C. Ernst R. C. Hinkle
E. B. Morrow

sophomore class

W. N. Hicks W. I. Pickens
J. A. Morris, Jr. H. M. Shaw, Jr.
E. G. Singletary

CATALOG OF STUDENTS

1920-1921

GRADUATE STUDENTS

Name	*Course*	*Postoffice*
Graham Hudson Anthony, B.E.	M. E.	Hartford, Conn.
Bascum Otto Austin, B.E.	E. E.	Wilkinsburg, Pa.
Robert Kenneth Babington, B.E.	E. E.	Charlotte
Charles Edward Bell, B.S.	Chem.	Gainesville, Fla.
John Clarence Corl, V.M.D.	Agr.	Raleigh
John Bee Cotner, B.Pd.	Agr.	Raleigh
John William Cox, B.E.	C. E.	Oriental
Sherman Grady Crater, B.S.	Agr.	Raleigh
Roy Styring Dearstyne, B.S.	Agr.	Raleigh
Alvah Dunham, B.S.	Agr.	Raleigh
Norman Baird Foster, A.B.	Phys. and Math.	Raleigh
Gardner Marion Garren, Ph. B.	Agr.	Raleigh
Richard Frederick Giersch, Jr., B.E.	E. E.	Maryville, Tenn.
George William Gillette, B.E.	E. E.	Wilmington
Richard Nestus Gurley, B.E.	Tex.	Goldsboro
Frederick Morgan Haig, B.S.	Agr.	Raleigh
Dennis Henry Hall, Jr., B.S.	Agr.	Raleigh
John Fleming Harris, Jr., B.E.	M. E.	Pittsburg, Pa.
Russell Peyton Harris, B.S.	Agr.	Raleigh
Edgar Allen Hester, B.E.	E. E.	Pittsburg, Pa.
Walter Cleary Hopkins, B.E.	C. E.	Newport News, Va.
Charles Newton Hulvey, A.B.	Agr.	Raleigh
John Eli Ivey, B.S.	Agr.	Raleigh
Paul Thomas Long, B.S.	Agr.	Raleigh
Charles Washington Owens, B.E.	C. E.	Raleigh
Thomas Branson Parks, A.B.	Chem.	Raleigh
Paul Nathaniel Pittenger, B.E.	E. E.	Atlanta, Ga.
John Bailey Pridgen, B.E.	C. E.	Elm City
Hayden Roberts, B.S.	Phys. and Math.	Raleigh
Augustus Fleetwood Roller, B.A.	Agr.	Raleigh
Reginald Royston, B.S.	Agr.	Raleigh
Andrew Thomas Smith, B.S.	M. E.	Newport News, Va.
Walter Herbert Smith, B.E.	M. E.	Pittsburg, Pa.
Herbert Spencer, B.S., M. S.	Biology	Raleigh
Richard Vernon Terry, B.E.	M. E.	Newport News, Va.
Petrus Ferreira van der Watt	Agr.	Orange Free State
Howard Waldo Welles, Jr., B.E.	M. E.	Philadelphia, Pa.
John Henry Williams, A.B., M.S.	Agr.	Raleigh
Carle Clark Zimmerman	Agr.	Raleigh

SENIOR CLASS

Name	*Course*	*Postoffice*
Claude Winifred Absher	C. E.	Mount Airy
Judson Davis Albright, Jr.	Chem.	Charlotte
Norman Alexander	Agr.	Liberty
Samuel Craighead Alexander	Tex.	Charlotte
Charles Snead Allen	Tex.	Weldon
Hilton Worth Allsbrook	E. E.	Greenville
Lindsey Otis Armstrong	Agr.	Columbia
Charles Davis Arthur, Jr.	Chem.	Raleigh
Basil Duke Barr	M. E.	Creston
James Percy Beal	Chem.	Rocky Mount, R. 3
Richard Von Biberstein	C. E.	Charlotte
Grady Washington Bowers	Tex.	Lexington
Harvey Preston Brower	Agr.	Liberty, R. 1
Owens Hand Browne	Chem.	Raleigh
Samuel Lee Carpenter	Agr.	Lincolnton, R. 5
Obed Castelloe	Agr.	Aulander
Joseph Stickney Chamberlain	Agr.	Raleigh
Fred Sherwood Childs	Tex.	Lincolnton
Henry Ottis Clodfelter	M. E.	Lexington, R. 1
Robert Stuart Collins	E. E.	Catharine Lake
Wilburn Bryan Collins	Agr.	Edwards Crossroads
Ernest William Constable	Chem.	Lake Landing
William Howard Corpening	Agr.	Worry
Robert Andrew Coughenour	M. E.	Scotland Neck
Louis Broaddus Daniel	Tex.	Weldon
Benjamin Franklin Daughety	Agr.	Kinston, R. 2
Robert Antine McColough Deal	C. E.	Spencer
Pleasant Leroy Kluttz Deaton	C. E.	Statesville, R. 1
Walter Connor Eagles	Agr.	Macclesfield, R. 1
Robert Craig Ernst	Chem.	Henderson
Joseph Graham Evans	M. E.	Elizabeth City
Dewey Augustus Floyd	E. E.	Fairmont, R. 3
Perry Hamilton Gaston	Agr.	Candler, R. 2
Bartholomew Moore Gatling, Jr.	E. E.	Raleigh
John Gatling	E. E.	Raleigh
Lev Charles Guirkin	E. E.	Elizabeth City
Laurens Adams Hamilton	Agr.	Carlisle, S. C.
John William Harden, Jr.	Agr.	Raleigh
Robert Cliff Hinkle	Tex.	Lexington
Roy Arthur Hollowell	Agr.	Aulander
Oliver Knight Holmes	Agr.	Fayetteville, R. 2
Frank Porter Huskin	E. E.	Andrews
Arthur Spruill Jennette	C. E.	New Bern

Name	*Course*	*Postoffice*
Judson Peele Johnson	M. E.	Chalybeate Springs
William Morton Johnston	Agr.	Greenville
Asbury Crouse Jones	Agr.	Winston-Salem
John Keith Jones	E. E.	Raleigh
William Hugh Jones	Agr.	Winton
Leslie LaFayette Jordan	C. E.	Raleigh
Richard Greene Kendrick	Tex.	Charlotte
Charles Dickerson Kirkpatrick	Agr.	Charlotte, R. 2
John Haywood Lane	Agr.	Wilson, R. 4
William Andrew Franklin Lawing	E. E.	Huntersville, R. 20
Joel Brevard Lawrence	Agr.	Statesville, R. 5
Andrew John Leddy	Tex. Chem. and Dyeing	Taunton, Mass.
Edwin Clinard LeGrand	Tex.	Mocksville
James Furman Lewis	Tex.	Fairmont, R. 3
Homer DeWitt Long	C. E.	Concord
Samuel Marsh Long	E. E.	Trenton, S. C., R. 1
Wilson Copes McCoy	Agr.	Portsmouth, Va.
Warren Staten Mann	E. E.	Fairfield
Edward Branham Manning	Tex.	Henderson
John Daniel Miller	Agr.	Newton, R. 4
Bartholomew Figures Moore	Tex.	Raleigh
Augustus Ray Morrow	Agr.	Mount Ulla, R. 2
Emmett Brown Morrow	Agr.	Mount Ulla, R. 2
Manley Parker Moss	C. E.	Youngsville
George King Murray	Tex.	Charlotte
Victor Frederick Orlando Olivier	Agr.	Kalkspruit, South Africa
Dolphin Henry Overton	Agr.	Nashville
Edwin Pate	Agr.	Laurel Hill
Lewis Bernard Peck	C. E.	Concord
Josephus Daniels Pell	Tex.	Raleigh
George Tarry Peoples	Tex.	Townsville, R. 1
Edward Ancel Peterkin	Agr.	Dillon, S. C.
James Robert Powell	Agr.	Clinton, R. 2
Jesse Harris Proctor	C. E.	East Durham
Kirby Jernigan Quinn	Chem.	Warsaw, R. 2
Charles Louis Rackley	Agr.	Hendersonville, R. 4
Martin Luther Rhodes	Tex.	Lincolnton
Wade Hampton Rice	Agr.	Wilson
John Hollis Ripple	Tex.	Lexington
Thomas Davis Roper, Jr.	Chem.	Portsmouth, Va.
Guy Rudisill Sipe	Agr.	Cherryville
Geddie Blair Strickland	C. E.	High Point
Junius Albert Temple	C. E.	Sanford

Name	*Course*	*Postoffice*
John Clifton Terry	M. E.	Rockingham
Theodore Ruggles Timby	E. E.	Fayetteville
John Dickson Wallace	E. E.	Laurinburg, R. 3
Sidney Jones Walters	M. E.	Oxford
Charles Edward Watson	Chem	Kipling, R. 1
William Richard Wearn, Jr.	C. E.	Charlotte
Herbert Carlyle Weathers	M. E.	Raleigh
Duncan Alexander Wicker	C. E.	Greensboro
Atticus Morris Williams	Agr.	Duke, R. 1
Robert Edgar Williams, Jr.	E. E.	Wilmington
David Carlyle Windley	Agr.	Pantego
Elmer Bernard Young	C. E.	Rock Hill, S. C.
Thomas Grady Young	C. E.	Micaville
Otis Allen Zachary	Tex.	Cooleemee

JUNIOR CLASS

Wilton Leroy Adams	Agr.	Raynham, R. 1
John Thomas Alderman, Jr.	E. E.	Henderson
Thomas Watkins Alexander	Tex.	Derita, R. 14
Edward Michael Arendell	E. E.	Morehead City
William Franklin Armstrong	Agr.	Columbia
Gilbert Seth Arthur	Chem.	Raleigh
Vernon Leith Ashworth	Agr.	Fairview
Clarence Edward Bailes	Tex.	Charlotte, R. 11
Frank Kugler Baker	M. E.	Norfolk, Va.
Harold Hoyt Bangs	E. E.	Hendersonville
Charlie Raine Barber	Tex.	Greensboro
Gerald Thomas Barnes	C. E.	Kenly, R. 4
Edward Doyle Barr	E. E.	Creston
William Foy Beal	C. E.	Rocky Mount, R. 3
Terry Fulton Beamer	Agr.	Mount Airy, R. 3
Milton Erwin Beland	M. E.	Wilson
Graham Whitehurst Bell	C. E.	Elizabeth City
Bracknel Arthur Benfield	Agr.	Crossnore
Guy Hibert Bennett	E. E.	Morehead City
Earl Ray Betts	Tex.	Raleigh
William Wade Blakeney	Tex.	Monroe, R. 4
Julian H. Blue	C. E.	Raeford
Garnet Lee Booker	Agr.	Greensboro, R. 7
Benjamin Avery Brackett	M. E.	Landrum, S. C.
Olin Link Bradshaw	E. E.	Lenoir
William Hand Browne, III	E. E.	Raleigh
Clyde Davis Buchanan	E. E.	Dillsboro
Charles Ormonde Butler	M. E.	Wilmington

Name	*Course*	*Postoffice*
Doyle Leroy Cannon	E. E.	Rosemary
William Walker Cantrell	Tex.	Winston-Salem
Addis Pittard Cates	Agr.	Mebane, R. 3
George Bryan Cherry	C. E.	Windsor
Colin F. Churchill	E. E.	Kinston
Clinton Albert Cilley	M. E.	Hickory
Frank Siler Clarke	C. E	Ansonville, R. 1
Edwin Osborne Clarkson	Tex.	Charlotte
Quincy Ethan Colvard	Agr.	Wilbar
Bruce Harrison Conner	C. E.	Rich Square
Flave Hart Corpening	M. E.	Brevard
William Oliver Crary	M. E.	Brevard
Theodore Graham Craver	M. E.	Lexington
Merryman Rose Davis	Tex.	Charlotte
Robert Lewis Davis	Tex.	Henderson, R. 4
Harold Albert Deal	Tex.	Randleman
Robert Eston Dunning	Agr.	Aulander
William Wall Ellerbe	M. E.	Rockingham, R. 4
John Franklin Ervin	E. E.	Catawba
Paul Koonce Ewell	M. E.	Elizabethtown
Isaac Worth Faires	Agr.	Charlotte, R. 11
Dwight Moody Farmer	Agr.	Bailey, R. 2
Ralph Powell Farrell	Tex.	Leaksville
Robert Samuel Flippin	M. E.	Pilot Mountain
Averette Gaston Floyd	Agr.	Fairmont, R. 1
Giles Pittman Floyd	M. E.	Fairmont, R. 3
John Elliott Fortescue	M. E.	Scranton, R. 1
Josephus Coston Foscue	Agr.	Maysville
William Franklin Freeman	C. E.	Norfolk, Va.
John David Gill	C. E.	Henderson, R. 4
Julian Austin Glazener	Agr.	Raleigh
William Franklin Graham	M. E.	Rennert, R. 1
Luther Wilson Greene	Chem.	Norfolk, Va.
John Dwight Groome	Agr.	Greensboro, R. 3
Joseph Daniel Groome	Tex.	Greensboro, R. 3
Walter Durham Hampton	E. E.	Brevard
Alexander Caswell Hamrick	M. E.	Asheville
William Thomas Harding, Jr.	M. E.	Raleigh
Lera Rhinehart Harrill	Agr.	Lattimore
Earnest Baton Harris	C. E.	Spencer
Elliott Woodard Harris	E. E.	Seaboard
James Calhoun Harris, Jr.	Tex.	Anderson, S. C.
Charley Henry Herring	E. E.	Dillon, S. C.
William Norwood Hicks	M. E.	Durham, R. 4

Name	*Course*	*Postoffice*
Henry Selby Hill	E. E.	New Bern
James Oscar Holt	Tex.	Greensboro, R. 2
John Gates Huff	M. E.	East Bend
Edward Everett Inscoe	E. E.	Castalia, R. 1
Henry Taylor Ivey	C. E.	Proctorville
Clyde Alfred Jackson	Agr.	High Point, R. 2
Donald Burton Jenkins	C. E.	Greenville
John Frank Johnson	Agr.	Mount Airy, R. 3
George Shuford Johnston	Tex.	Hickory
Luther Jackson Jordan	C. E.	Elm City, R. 4
Frederick Rulfs Keith	Agr.	Currie, R. 2
Heath Owens Kennette	Tex.	Mooresville
Robert Morris Kimzey	Agr.	Horse Shoe, R. 1
Henry Jefferson Kinard	M. E.	Epworth, S. C.
Daniel Emmet Koonts	Agr.	Cooleemee
Raymond Warner Kraft	E. E.	Portsmouth, Va.
Paul Frederick Lancaster	C. E.	Winston-Salem
Lewis Burleyson Laughlin	Tex.	Concord
Roy Batterham Lee	E. E.	Asheville
Leonidas Rosser LeGwin	C. E.	Wilmington
Charles Darwin Lemmond	M. E.	Charlotte
Hiram Samuel Lemmond	C. E.	Indian Trail
William Bennett Liles	Agr.	Lilesville
William Joseph Lucas	E. E.	New Bern
Harvey Ellis McComb, Jr.	Agr.	Hickory
Bertram Augustus McCown	Agr.	Anderson, S. C., R. 6
John Alex. McIntyre	Agr.	Laurinburg, R. 3
Owen Clinton McKinnie, Jr.	M. E.	Winston-Salem
William Gordon McKoy	C. E.	Old Fort
John Franklin McLaurin	Tex.	McColl, S. C.
Arthur Frazier McLean	E. E.	Asheville
John Frank McLeod	Agr.	McBee, S. C.
Jennings Brooks Mabry	E. E.	Shankle
Ralph Faison Matthews	E. E.	Raleigh
Sidney Franklin Mauney, Jr.	Chem.	Old Fort
Frank Barnard Meacham	Agr.	Statesville, R. 6
William Thomas Midyette	Agr.	Lake Landing, R. 1
Robert Lathan Mills	Chem.	Mooresville
George Walker Mong	C. E.	Goldsboro
William Martin Monroe	Agr.	Laurinburg, R. 2
Thomas Gilbert Moody	C. E.	Waynesville, R. 2
James Wright Moore	E. E.	Trenton, S. C.
Eli John Morgan	Agr.	Benson
Paul Lyman Moses	Agr.	Higdonville

Name	*Course*	*Postoffice*
James Lloyd Nicholson	C. E.	Richlands
Koyt Samuel Nissen	M. E.	Winston-Salem
Harold Ernest Norwood	E. E.	Brevard
John Hugh Norwood, Jr.	C. E.	Norwood
James Gordon Olive	Agr.	Apex, R. 3
Ryland Wrenn Olive	M. E.	Greensboro
Dolphin Dunnaha Overton, Jr.	M. E.	Greenville
Thomas Needham Park	C. E.	Raleigh
George Thomas Parker, Jr.	E. E.	Kelford
Earl Deaton Pasour	Agr.	Dallas, R. 1
Charles Fisher Paxton, Jr.	Chem.	Charlotte
Calvin Winchester Pegram	Agr.	Lincolnton
Nathaniel Dunn Peirson	C. E.	Enfield
Wesley Irwin Pickens	Tex.	Charlotte
Jack Dillard Piercy	E. E.	Andrews
Watson Odean Powell	E. E.	Portsmouth, Va.
Charles Franklin Reisner, Jr.	Tex.	Salisbury
Henry Burton Robinson	E. E.	Columbia, S. C.
Edward Wolfe Ruggles	E. E.	Southern Pines
Alfred Leavy Sears	Tex.	Raleigh
Henry Marchand Shaw, Jr.	M. E.	Oxford
Emory Gordon Singletary	C. E.	Proctorville
R. D. Van Sisk	M. E.	Franklin
Walter Thomas Sledge	Tex.	Fairview
James Weldon Spratt	C. E.	Charlotte, R. 3
Edward Ransom Spruill	M. E.	Elizabeth City
William Weaver Starr	E. E.	Wilkesboro
William Little Steele, Jr.	Tex.	Rockingham
Matt Ransom Stephenson, Jr.	Chem.	Seaboard
Daniel Augustus Stevens	M. E.	Martins Point, S. C.
Robert McIntosh Stikeleather	M. E.	Taylorsville
William Alexander Stillwell	M. E.	Webster
Thomas Francis Stradley	E. E.	Asheville
Samuel Hector Strickland	C. E.	High Point
Ezra Carl Tatum	Agr.	Mocksville, R. 4
Carl Taylor	C. E.	Wilson
James William Tolar	Tex.	Cedar Grove, R. 2
Albert Humphrey Tompkins	C. E.	Newnan, Ga.
Francis Asbury Townsend	Tex.	Ninety-Six, S. C.
Richard Lee Townsend	E. E.	Manquin, Va.
Richard Dent Turner	C. E.	North Wilkesboro
Friel Tate Vance	E. E.	Plumtree
Alexander Holloway Veazey	Agr.	Creedmoor, R. 3
Henry Harward Weaver	C. E.	Durham

Name	*Course*	*Postoffice*
William Burgess White	Agr.	Olin
Herbert Lafayette Whitesell	Agr.	Gibsonville
Benton Wray Williams	M. E.	Angier
Thomas Smith Williams	C. E.	Buie
Charles Rea Wilson	C. E.	Jackson Springs
George Luther Winchester	Agr.	Summerfield, R. 2
Albert Macon Worth	C. E.	Raleigh, R. 2
David Ralph Wright	E. E.	Hunting Creek

SOPHOMORE CLASS

Richard Baxter Alexander	E. E.	Montreat
William Roy Alexander	Agr.	Fletcher, R. 2
Ethan Allen	E. E.	Biltmore
Samuel Adolph Allred	Agr.	Staley
Willard Roy Anderson	Agr.	Mars Hill
Bruce Palmer Barber	C. E.	Reidsville
William Jackson Barber	M. E.	Reidsville
William Horace Barnhardt	Tex.	Harrisburg R. 2
William Plummer Batchelor Jr.	C. E.	Raleigh, R. 5
Julian Frost Baum	Chem.	Poplar Branch
Robah Fetus Baynes	Tex.	Hurdles Mill, R. 2
George Harrison Becton	Agr.	Goldsboro, R. 1
Lawrence Duffy Bell	C. E.	Pilot Mountain
William Murphey Bethune	E. E.	Clinton
Joseph Kelley Blum	Chem.	Reidsville, R. 2
Thomas Franklin Bostian	Agr.	China Grove
George Thornton Bostic	Tex.	Shelby
Hasel Oren Boyd	Chem.	Goldsboro, R. 4
Edgar Thomas Brame	C. E.	Kenly, R. 3
John Rhodes Brock	M. E.	Richlands, R. 2
Robert Houston Broom, Jr.	E. E.	Hookerton
James Milton Brown, Jr.	E. E.	Albemarle
Daniel Budisavljevitch	Agr.	Korenica, Serbia
William Taylor Burgin	Tex.	Old Fort
Miles Smith Carpenter	Tex.	Gastonia
Robert Lee Carpenter	C. E.	Charlotte, R. 11
Barrett Houston Champion	M. E.	Lawndale, R. 1
Marvin Douglas Clark	C. E.	Charlotte, R. 4
Irving Allen Clay, Jr.	M. E.	Clinton
William Sturges Collins	E. E.	Middleburg
Elmer Randolph Commander	E. E.	Elizabeth City
Euclid Monroe Cooke	Tex. Chem.	Graham, R. 2
John Bennett Cornwell	Tex.	Chester, S. C.
Andrew Jackson Corpening	Tex.	Worry

Name	*Course*	*Postoffice*
Richard Hallas Crockford	M. E.	Charlotte, R. 5
Charles Howard Culpepper	M. E.	Portsmouth, Va.
William Michael Cummings	E. E.	Reidsville, R. 2
Harry Bernard Curtis	Tex.	Greensboro
Stanley Leon Daughtridge	Agr.	Rocky Mount, R. 6
James Campbell Davis	E. E.	Waxhaw
Roy Wilson Davis	Agr.	Beaufort
Ralph MacGill Deal	E. E.	Randleman
Douglas William Debnam	E. E.	Snow Hill
Clarence Evans Dedmon	M. E.	Shelby, R. 6
Richard Samuel Dill	M. E.	New Bern
Henry Bryan Dixon	Tex.	Mebane
Silas Colin Dougherty	C. E.	Asheville
Harold Davis Duke	Tex.	Hamlet
Henry Emerson Duke	M. E.	Durham
Dean Franklin Duncan	M. E.	Edwards Crossroads
Samuel Davis Dysart	Chem.	Lenoir
Fred Graham Elliott	Agr.	Sanford, R. 4
Maurice Shaw Emmart	Agr.	Winston-Salem
Lieu Derain Ertel	Agr.	Morrow, Ohio, R. 1
Arvle Franklin Everhart	Tex.	Lexington
George Grose Farrington	Agr.	Charlotte
Thomas Connor Felton	M. E.	Wilson
John Franklin Ferguson	E. E.	Littleton
William Claude Ferguson	C. E.	Vass, R. 1
James Barr Fink	Agr.	Glass, R. 1
Hoy Lee Fisher	C. E.	Rockwell, R. 2
Alva Justin Floyd	C. E.	Fair Bluff
Alvin Marcus Fountain	E. E.	Catharine Lake, R. 1
Edward Melton Furlough	E. E.	Columbia, R. 1
Claude Gettys	Agr.	Hollis, R. 1
John Henry Gill	C. E.	Henderson, R. 4
Herbert Shields Glenn	Tex.	Gastonia
George Rockco Gooding	Agr.	Bachelor
Edgar Ford Graham	M. E.	Rennert, R. 1
Henry Des'Champs Green	Agr.	Hendersonville
Joseph Logan Greenlee	C. E.	Old Fort, R. 1
Charlie Witt Gunter	Tex.	Apex, R. 5
James Samuel Hall, Jr.	M. E.	Fayetteville
Joseph Mann Harris	Agr.	Louisburg
Scott Glennard Harris	E. E.	Hendersonville
Zeb. Marion Harry	E. E.	Gastonia
James Czar Harwell	E. E.	Troutman, R. 1
William Booker Haynes	C. E.	Mount Airy

Name	*Course*	*Postoffice*
John Dawkins Henry	E. E.	North Wilkesboro
John Leland Higgins	C. E.	Jacksonville
George Sterling Hobson	E. E.	Greensboro
John William Hodges	Agr.	Jackson, Ga.
Jack Howard	Agr.	Denver, R. 2
James Owen Hubbard	E. E.	Moravian Falls
Blair Jenkins, Jr.	E. E.	Lincolnton
William Harney Jennings, Jr.	Chem.	Elizabeth City
Wilburn Carr John	M. E.	Lumber Bridge
James Washington Johnson	Tex.	Weldon
David Loy Jones	Agr	Alexis, R. 1
Evett Asbury Jones	E. E.	Earl
Everett Thomas Kearns	Agr.	Thomasville
Leroy Monroe Keever	E. E.	Lincolnton
Harvey Nathan Kelly	Agr.	Abbottsburg, R. 1
Robert Bliss Keys	Agr.	Damascus, Va.
James Dinwiddie Kilgore	C. E.	Raleigh
Carl Dan Killian	Agr.	Hayesville
James Richard King	Tex.	Statesville
Marion Elmer King	E. E.	Fredericksburg, Va.
Moses Kiser	Agr.	Reepsville
Francis Wilson Kittrell	Chem.	Landrum, S. C.
Bruce Edward Lancaster	C. E.	Henderson, R. 4
Thomas Smith Lee	Tex.	Charlotte
Thomas Alexander Leeper	C. E.	Belmont, R. 1
Charles Shandy Leigh	Tex.	Winston-Salem
Graydon Holmes Lineberry	E. E.	North Wilkesboro
Frank Bennett Looper	E. E.	Granite Falls
Hubert Prentiss McCain	E. E	Waxhaw
Richard Harry McComb	Tex.	Hickory
Herbert Raymond Madry	Agr.	Scotland Neck
Samuel Willard Mendenhall	Agr.	High Point, R. 2
Alonza Thomas Mial, Jr.	M. E.	Raleigh
Wilton Clements Mock	Agr.	Damascus, Va.
Andrew Lee Monroe	E. E.	Monroe
Fred Bethune Monroe	Agr.	Biscoe
Ernest Waldo Moore	E. E.	Rural Hall, R. 2
Hugh Maxwell Morrison	C. E.	Concord, R. 1
Miodrag Mrshevitch	Agr.	Usitze, Serbia
Robert Alexander Musgrove	Tex.	Weldon
Samuel Gray Newlin, Jr.	Tex.	Randleman
George David Newton	C. E.	Hope Mills
Cyril Warren Norman	E. E.	Plymouth
Bonnie Frank Norris, Jr.	M. E.	Gastonia

Name	*Course*	*Postoffice*
Lewis Bear Pakula	E. E.	Raleigh
Cyrus Colon Parker	E. E.	Aulander
Alden Bryan Pearson	M. E.	Atlanta, Ga.
Shetton Reed Poole	Agr.	Jackson Springs, R. 1
Luther Eugene Raper	Agr.	Welcome, R. 1
Hardy Murfree Ray	E. E.	Raleigh
Hazel Emmet Rea	Tex.	Matthews, R. 27
Paul Vernon Redd	Tex.	Maysville, R. 2
George Howard Redfearn	M. E.	Biltmore, R. 1
Marcus Lafayette Reed, Jr.	M. E.	Asheville, R. 2
Conley Jeremiah Rich	Agr.	Asheville, R. 4
Thomas Purdie Richardson, Jr.	E. E.	Lilesville
Joseph Asher Rickards	M. E.	Ocean View, Del.
Wade Hampton Ritchie	Agr.	Concord, R. 4
Mangum Martin Roberts	Tex.	Shelby
Thomas Kesler Roberts	C. E.	Red Springs
John Robertson, Jr.	E. E.	Raleigh
Rufus Frederick Routh	Agr.	Randleman, R. 2
William Jennings Russell	E. E.	Albemarle
Joseph Judson Sanders	Agr.	Smithfield, R. 1
Herbert London Seagrove	Agr.	Sanford, R. 4
William Franklin Shipman	Tex.	Raleigh
Joe Luther Shuping	E. E.	Morganton, R. 4
Isaac Silverman	M. E.	Wilmington
Joseph Stanton Skeen	Tex.	Ashboro
Roy Edwin Smith	M. E.	Benson
James Harold Sojourner	C. E.	Denmark, S. C.
Amos Morehead Stack, III	Tex.	Monroe
Tolbert Lacy Stallings	C. E.	Louisburg, R. 4
Julian Byrd Stepp	E. E.	Black Mountain
Daniel Elmond Stewart	E. E.	Coats
William Denny Stockton	Tex.	Mocksville, R. 2
Hernay Elton Stout	M. E.	Siler City
Joseph Arnold Stradley	E. E.	Asheville
William Hunter Strong	Agr.	Raleigh
Eugene Frank Strupe	Agr.	Tobaccoville, R. 1
George Joseph Studdert, Jr.	C. E.	Norfolk, Va.
Leoleon Douglass Styron	E. E.	Morehead City
Patrick McClellan Sullivan	E. E.	Savannah, Ga.
Timothy Wyatt Suttenfield	Tex.	Leaksville, R. 1
Hugh Haynes Tate	Chem.	Old Fort
Matthew Lee Tatum	Agr.	Fayetteville, R. 3
Jesse Powell Tayloe	Agr.	Aulander
Perry Nichols Taylor	Agr.	White Plains

Name	*Course*	*Postoffice*
Vestal Columbus Taylor	Agr.	Ararat, R. 1
Joseph Earl Teague	Chem.	High Point
Mason Page Thomas	Tex.	Charlottesville, Va.
James Lewis Turnage	E. E.	Wilsons Mills
Wiley Ludwig Umberger	Agr.	Concord, R. 3
Robert Ward Underwood	M. E.	Durham
David Brainerd Vansant	M. E.	Chestertown, Md., R. 3
Robert Edward Vick	Agr.	Seaboard
James Lester Wall	Agr.	Edgar
Robert Walter Wallace, Jr.	E. E.	Morehead City
James Sloan Ware	Agr.	Kings Mountain, R. 4
William Graham Ware	Tex.	Kings Mountain, R. 4
Charles Henry Warren	Agr.	Lenoir
Harry Swain Webster	M. E.	Weaverville
John Kendle Wells, Jr.	M. E.	Middleburg
William Love West, Jr.	M. E.	Whiteville
Charles Mayfield White, Jr.	C. E.	Manson, R. 1
Thomas Arlington White	Agr.	Aulander, R. 1
William Dunlop White	C. E.	Burlington
William Wallace White	M. E.	Manson, R. 1
John Summie Whitener	C. E.	Hickory
Claude Baxter Williams	Tex.	Lincolnton
Dewey Lee Williams	Tex.	Lincolnton
Clyde Gordon Willis	E. E.	Morehead City
Philip Augustus Willis	M. E.	New Bern
Ralph Harper Wilson	Tex.	Wilsons Mills
Samuel Eugene Wilson	Agr.	Louisburg, R. 5
Thomas Elmore Wray	Tex.	Reidsville
Winfred Denning Yarboro	Agr.	Hope Mills, R. 2

FRESHMAN CLASS

John Arthur Abernathy	E. E.	Harrisburg, R. 2
Henry Stevens Adams	M. E.	Monroe
Durham Edward Allen	E. E.	Clarkton, R. 1
James Robert Allen	Tex.	Louisburg
Donald Glen Allison	Agr.	Hayesville
John Leslie Andrews	E. E.	Greensboro
Jesse Oscar Anthony	Agr.	Belew Creek, R. 1
Russell Conwell Baggett	E. E.	Lewiston
Wm. Henry Hawes Bagwell, Jr.	E. E.	Hamlet
Lloyd Underwood Bailey	E. E.	Manteo
Albert Clarendon Bangs	E. E.	Hendersonville
Carey Hunter Banks	Agr.	Wilson
Ernest Gail Barker	M. E.	Apex, R. 1

Name	*Course*	*Postoffice*
Kenneth Lester Barkley	M. E.	Charlotte, R. 7
Milton Herman Barmettler	M. E.	Raleigh, R. 4
Craighead Lentz Barnhardt	C. E.	Salisbury
Palmer Hubbard Beam	M. E.	Shelby
Fred Lee Beamer	Tex.	Mount Airy, R. 3
Percy Cleveland Beatty	Tex.	Mount Holly, R. 1
Wathers Shockency Benham	M. E.	Graham
Cornelius LeRoy Benn	Tex.	Thelma
Boyd Biggers	Tex.	Concord
James Albert Blakeney	Agr.	Matthews, R. 17
Gerald Raeden Blount	Agr.	Mackeys
Frank Eugene Bradley	E. E.	Statesville
William Scott Brawley, Jr.	C. E.	Lenoir
Emmanuel Oscar Breen	Agr.	Rocky Mount
Carl Bridges	Agr.	Shelby
Earley Winfred Bridges	M. E.	Raleigh
Thomas Wayne Bridges	Agr.	Mooresboro
James Ethelbert Briggs	E. E.	Raleigh
David Julian Brinkley	M. E.	Plymouth
James Edward Britt	M. E.	Clinton, R. 3
Charlie Bradford Brown	Agr.	Statesville, R. 6
James Bryan Brown	E. E.	Rocky Point
McGreigor Ernul Brown	E. E.	Greenville
Robert Perry Brown	E. E.	Lewiston
Godfrey Hand Browne	Chem.	Raleigh
Lorenzo Newman Browne	E. E.	Ramseur, R. 1
John Duncan Bullard	Agr.	Parkton
Everett Wright Burgess	M. E.	Elizabeth City
Franklin Page Bussells	E. E.	Fernandina, Fla.
Julian Butler	Tex.	St. Pauls
John Monroe Capps	Agr.	Lucama
William Cone Carpenter	Agr.	Cherryville, R. 1
Alva Furman Carr	Agr.	Meggett, S. C.
Wilbert James Carter	Tex.	Wallace
Theodore Roosevelt Causey	E. E.	Greensboro
Julius Joslin Chamberlain	Tex.	Raleigh
Jesse Birt Champion	M. E.	Henderson, R. 6
George Albert Chandler	C. E.	Barber
Norwood Bennett Chesnutt	Agr.	Turkey
James Edward Cheves	Agr.	Bunn
Walter Russell Cline	Agr.	Newton, R. 5
John Edward Close	M. E.	Dunmore, Pa.
Elbert Daniel Cody	Agr.	Misenheimer
William McCoy Corkill	C. E.	Chester, S. C.

Name	*Course*	*Postoffice*
James Bruce Crater	Agr.	Cycle
Louis Samuel Crisp	Tex.	Falkland
William LeRoy Crosby	E. E.	Asheville
Dwight Shaw Cross	Tex.	Huntersville
Ernest Frank Culbreath	M. E.	Ninety-Six, S. C.
Herman Fredrick Curtis	M. E.	Greensboro
Joseph Jonathan Davis	C. E.	Stovall
John Samuel Davis	Agr.	Seven Springs, R. 1
Paul Vernon Davis	Tex.	Lucama
Oscar Elmore Franklin Dellinger	E. E.	Conover
Duncan Jennings DeVane	Agr.	Wilmington
Paxton Theodore Dixon	Agr.	New Bern, R. 2
Jefferson Davis Donnahoe	C. E.	Asheville
Claude Thomas Doughton	Tex.	Laurel Springs
Louis Daniel Duval	M. E.	Charlotte
Ernest McNiell Eller	E. E.	North Wilkesboro
Woodie Eubanks	Agr.	Lumberton, R. 1
Thomas Owen Evans, Jr.	Agr.	Maxton
James Lafette Ewell	Agr.	Beaufort
James Woodell Fagan	Agr.	Aberdeen
John Thomas Faucett	Tex.	Raleigh
Charles Douglas Faucette	M. E.	Durham
Zeb Vance Ferrell	Tex.	Ruffin
Clarence Edwin Field	C. E.	Bamberg, S. C.
Roy Guyles Foster	C. E.	Wilkesboro
Willie Lawrence Foster	Agr.	Mebane, R. 1
William Malcolm Fowler	E. E.	Duke, R. 2
Cloid Cleveland Fox	Tex.	New Hope, R. 1
William Henry Fox	E. E.	Henderson
William Arthur Franklin	Agr.	Linville Falls
Cecil McCally Fry	Agr.	Sunburst
Francis Sidney Gardner, Jr.	C. E.	Rocky Mount
Clement Geitner	Tex.	Hickory
Karl Browning Glenn	E. E.	Hendersonville
Charles Bryan Graham	Agr.	Sulphur Springs
Archie Wilson Green, Jr.	C. E.	Linwood, R. 1
Charles Armfield Groome	M. E.	Greensboro, R. 3
George Monroe Groome	Tex.	Greensboro, R. 3
Luke Polycarp Hahn	Agr.	Hickory
Charlie Lowell Hall	Agr.	Round Peak, R. 1
Donald Walton Hamilton	M. E.	Raleigh
Howard Derward Hamrick	E. E.	Ruth
Leon Jackson Harrell	M. E.	Goldsboro, R. 3
Claude Edward Harris	E. E.	Macon, R. 2

Name	*Course*	*Postoffice*
Lucian Haywood Harris, Jr.	Tex.	Salisbury
Thomas Mortimer Harris	Tex.	Mapleville, R. 1
Simon Green Hayes	C. E.	Rocky Point
Henry Allen Heinzerling	M. E.	Statesville
Richard Henderson	C. E.	Salisbury
Henry Dewey Hester	E. E.	Whiteville, R. 1
Matthew Clinton High	Agr.	Durham, R. 3
John Robert Hines	Tex.	Black Mountain
Walter Nicholson Hipp	E. E.	Charlotte, R. 6
Isaac Middleton Hobbs	Tex.	Clinton
Robert Thomas Hodges	Tex.	Washington
Robert Clyde Holland	E. E.	Middlesex
Ivan Lacy Holloman	E. E.	New Hill, R. 1
Jesse Vann Holloman	C. E.	Aulander, R. 3
Adolph Jenkins Honeycutt	Agr.	Durham
Percy Victor Hooper	E. E.	Elizabeth City
Exum Boyd Horton	Agr.	Raleigh
Walter Harmon Jenkins	E. E.	Goldsboro
Owen Tyler Jilcott	M. E.	Roxobel
William Albert Jinnette	Agr.	Bentonville, R. 1
Ervin Monroe Johnson	Agr.	Lillington, R. 1
Thomas Ruffin Johnson	Tex.	Goldsboro
William Willis Johnston	Agr.	Weldon
Benjamin Moseley Jones, Jr.	E. E.	Asheville
Clarkson Jones	Tex.	Little Switzerland
Daniel Silas Jones	M. E.	Raeford
James Carl Jones	M. E.	Raleigh, R. 1
Mordaunt Savage Jones	C. E.	Norfolk, Va.
Peter Hines Jones	M. E.	Raleigh, R. 1
Andrew Maitland Joyner	Tex.	Woodville
Clarence Kelly	C. E.	Orrum
Edward Dickson Kendrick	Agr.	Fallston
Herman Connor Kennett	Agr.	Pleasant Garden, R. 1
Charlie Leon Ketchie	E. E.	Kannapolis
William Thomas King	Tex.	Louisburg
James Paul Kiser	Agr.	Bessemer City, R. 2
Charles Alden Knight	E. E.	Williamston
John Ruffin Knott	Agr.	Oxford, R. 2
George William Knox, Jr.	E. E.	Clover, S. C.
John Hall Lander	C. E.	Greenwood, S. C.
Oliver Dockery Landis	Tex.	Charlotte
Tom Bright Lankford	Agr.	Harmony
Gaither Calvin Lassiter	M. E.	Hillsboro
Thomas Elliott Lattimore	Tex.	Shelby, R. 5

Name	*Course*	*Postoffice*
Harry Campbell Lawing	E. E.	Huntersville R. 20
Ellis Potter Lawrence	E. E.	Raleigh
Clarence Henry Lee	M. E.	Monroe
Thomas Lee, Jr.	Tex.	Waynesville
Henry Daniel Lenderman	M. E.	Wilkesboro
William Montgomery Lentz	E. E.	Concord
Clarence Windfield Lewis	Agr.	Greensboro, R. 6
Richard Vernon Liles	Agr.	Lilesville
Joe Morris Lilly	Tex.	Norwood
Paul Bennett Little	M. E.	Wadesboro
William Rector Loftin	M. E.	Mount Olive
Harry Arthur Lytle	Tex.	Asheville
Eugene Patterson McAskill	Agr.	Jackson Springs
George Earl McKee	C. E.	Belmont, R. 1
John Brown McLaughlin, Jr.	Tex.	Charlotte
John Franklin McNair, Jr.	Tex.	Laurinburg
James Lawrence McNamara	E. E.	Dunmore, Pa.
Robert Edwin McPherson	Agr.	Mooresville
Charles Edward Mann	E. E.	Washington
Oscar Ferdinand Mason, Jr.	Tex.	Gastonia
Ben Heber Maynard	E. E.	Apex
Wayne Meares	E. E.	Chadbourn
Hugh L. Medford	C. E.	Waynesville, R. 2
James Davis Mellon	Agr.	Linwood
Francis Bruce Mewborn	E. E.	Grifton
Allen Mayne Miller	Tex.	Raleigh
Charles Stephen Miller	Agr.	Rougemont, R. 3
James Ross Miller	Agr.	Pineville
Elis Fleet Millsaps	Agr.	Hiddenite, R. 1
Thomas Franklin Moore	Agr.	Matthews, R. 26
John Pierpont Morgan	Agr.	Salem, Va., R. 1
Fred Crawford Morris	E. E.	Nealsville, R. 1
William Lee Meek Morris, Jr.	Agr.	Concord
Winfield Scott Morris	E. E.	Wilmington
John Rea Morrison	Tex.	Charlotte
Worth Edwin Morrison	M. E.	Wilkesboro
Eugene Harold Moss	E. E.	Lillington, R. 3
George Brashears Mundy	Agr.	Raleigh
Rowland Bobbitt Nash	Agr.	Franklinton, R. 3
Charles Herbert Neal	Tex.	Reidsville
George S. Norfleet, Jr.	C. E.	Woodville
Graham Tyree Olive	E. E.	Dunn
Robert Shelley Ormand	M. E.	Bessemer City
William Horace Overall	E. E.	Asheville

Name	*Course*	*Postoffice*
Lennie Lester Parker	M. E.	Maysville, R. 1
Artemas Blue Pate	Agr.	Raynham
William Hayne Patterson	Tex.	Patterson Springs
George Russell Paul	Tex.	North Adams, Mass.
James Marion Pickell	Tex.	Raleigh
James Conrad Price	E. E.	Charlotte, R. 12
William Tallie Price	E. E.	Holly Springs
Hubert Cherry Pritchard	E. E.	Windsor
Ray Maxwell Proffitt	Agr.	Bald Creek
Ralph Query	C. E.	Portsmouth, Va.
William Houston Rankin	Agr.	Greensboro
Watson Wharton Rankin	Tex.	Mooresville
John Elisha Raper	E. E.	Linwood
Samuel Alexander Redfearn	Agr.	Biltmore, R. 1
Jack Rees	Tex.	Greensboro
Charles Howard Revelle	C. E.	Conway, R. 1
Henry Wilbar Rhodes	M. E.	Comfort
Joseph Charles Richert, Jr.	E. E.	Highlands
Robert Burwell Riddick	E. E.	Belhaven
William Hugh Roberson	Tex.	Robersonville, R. 1
Cortelyou John Roberts	E. E.	West Asheville
John Perry Ryals	Agr.	Benson, R. 2
Pitts Hilliard Satterwhite	Agr.	Bridgewater
William Stanback Scales	Tex.	Rockingham
Ralph Henderson Scott	Agr.	Haw River, R. 1
Gustavius Frank Seymour	Agr.	Apex, R. 4
William Edward Shinn	Tex.	Georgeville
Forrest Herman Shuford	Tex.	Lawndale, R. 1
William Preston Simpson	E. E.	Raleigh
Robert Dickson Sloan	Tex.	Wilmington
Clyde F. Smith	Agr.	Rich Square
James Brown Smith	M. E.	Ruby, S. C.
Joseph Erle Smith	Chem.	Portsmouth, Va.
Thomas Jacob Smith	Tex.	Trenton, S. C., R. 1
Walter Ray Smith	C. E.	Farmville
Eugene Sydnor Spainhour	Tex.	Wilkesboro
Walter Armstead Spicer	M. E.	Stovall
Ralph Calver Stephens	E. E.	Holly Springs
Royal Clementine Stephenson	C. E.	Raleigh
John Neel Stewart	Agr.	Mooresville
William Walton Studdert	C. E.	Washington
Howard Barber Summerell	Tex.	China Grove, R. 2
John Douglas Sykes	Agr.	Harrellsville, R. 1
Edward Warren Taylor	Agr.	Kinston, R. 2

Name	*Course*	*Postoffice*
Henry Francis Taylor	Tex.	Monroe
Dewey Watters Thompson	Agr.	Richlands, R. 1
Loy Frank Thompson	C. E.	Shelby
Clifford Willard Tilson	Agr.	Mars Hill
Samuel Stevens Toler	C. E.	Rocky Mount
Louis Baynes Tomlinson	Agr.	Wilson
Franklin Simmons Trantham	M. E.	Durham
Lewis Baws Turner	C. E.	Durham
Anthony Ozark Uzzle	Tex.	Wilsons Mills
Cecil Bruce Vick	E. E.	Seaboard
Eugene Little Wall	Agr.	Pee Dee, S. C., R. 1
Junius Noble Wall	C. E.	Wendell
Cyrus Leslie Walton	Agr.	Jacksonville, R. 3
William Guy Weaver	Tex.	Rocky Mount, R. 1
William Starling Wells	E. E.	Morehead City
Lawrence Pennington West	E. E.	Fairmont
Thomas Jackson White, Jr.	Agr.	Concord, R. 6
Elbert Lee Whitley	E. E.	Albemarle
Raymond Spencer Wicker	E. E.	Raleigh
Francis Marion Williams	Tex.	Wilson
John Bright Williams	M. E.	Barnesville, R. 1
Arthur Bernard Wilson	M. E.	Lowell
Hackett Caldwell Wilson	Agr.	Shelby, R. 1
Millard Thomas Wilson	Tex.	Marion
Earl Franklin Windley	M. E.	Pantego
William Patrick Wootten	E. E.	Hickory
Sidney Russell Workman	Tex.	Burlington
Cheves Linton Wray, Jr.	M. E.	Sumter, S. C.
James Garrett Wray	E. E.	Burnsville
Clyde Robert Wright	Agr.	Hunting Creek
James Carpenter Young	M. E.	Mooresville

FIRST-YEAR AGRICULTURE

William Lubin Baker	Charlotte, R. 2
Willis Wicker Brittain	Horse Shoe, R. 2
John Clyde Brown	Waverly
Exum Monroe Causey	Greensboro, R. 6
Michael Burriss Chinnis	Phœnix, R. 1
James Thompson Cochran	West End
James Graddy Collum	Council, R. 2
William McKinley Cook	Belwood, R. 1
James Emerson Davenport	Mackeys
Alonzo James Davis, Jr.	Mount Olive

Name	*Postoffice*
Zalmon Adolphus Ennis	Duke, R. 2
Doak Finch	Trinity, R. 1
William Oliver Gibbs	Marion, R. 3
Whitfield Dunham Graham	Mount Ulla, R. 1
David Ray Hall	Red Springs
James Franklin Harkey	Charlotte, R. 1
Robert Joseph Harris	Rougemont, R. 3
Fred McKinley Hyatt	Weaverville
George Washington Ivey	Norwood
French Moledge Kimrey	Rock Creek, R. 1
John Frank McBane	Saxapahaw, R. 1
R. E. McDonald	Donalds, S. C., R. 1
Reuben Ernest McGoogan	Rennert, R. 1
Worth Jackson Maynard	Kerr, R. 1
Robert Campbell Murphy	Atkinson, R. 1
James Bryant Outlaw	Seven Springs, R. 3
James Albert Patterson	China Grove, R. 2
Lawrence Daniel Rhodes	Castle Hayne, R. 1
Charles Philip Robinson, Jr.	Morven, R. 2
Howard Reid Shelton	Davidson
Marvin Lee Snipes	Bynum, R. 1
Ernest William Steagall	Morven
Hester Myatt Stott	Wendell
Clay Carter Studdert	Washington
John Leroy Townsend	Lumberton, R. 1
Christian Heide Trask	Wilmington, R. 1
Clarence Bill Weatherly	Durham, R. 8
John Owen Wilson, Jr.	Mapleville, R. 1
Lawrence Abernathy Wolfe	Bessemer City, R. 2

ONE-YEAR AUTO

Ralph Boyd Cherry	Davidson, R. 2
Ralph Cooper Compton	Cedar Grove, R. 1
Mark Hayden Davis	Spring Creek
Marcus LaFayette Greer	Lenoir
Robert McKinley Hawkins	Crabtree, R. 1
Frank Ivey	Clinton
Jordan Mallory Jenkins	South Boston, Va.
Roland Monroe	Sanford, R. 1
William Collier Parrish	Rougemont, R. 3
Charles Floyd Sides	Salisbury, R. 8
Robert Neely Wingate	Charlotte, R. 4

FIRST-YEAR MECHANIC ART

Name	*Postoffice*
John Gorman Allen, Jr.	Raleigh
Henry Leslie Cobb	Gibsonville, R. 1
Chelcie Baird Eller	Ready Branch
Oscar Alexander Falls	Gastonia
Clifford Dorman Fentress	Lynnhaven, Va., R. 1
Walter Curtis Fitzgerald	Thomasville, R. 2
Robert Hampton Giles	Glen Alpine
James Robert Gribble	Dallas
Clyde Williams Hall	Stem, R. 1
Frank Falls Hicks	Lawndale
John Randolph Hudson	Shelby
Wilbur Theron Johnson	Pantego
Wilfred Ivey Johnston	Charlotte
Joseph Bartlett Kenny	Charlotte
Charles Walton Leslie	Morganton
William Andrew Little	Charlotte, R. 1
Patrick Henry Lynch, Jr.	Dunn
Sidney Otis Lyon	Creedmoor
George Lander McNeill	Sanford
Gerald Hoover Mahaffee	Henrietta
Lloyd Malcom Monroe	Biscoe
Robert Andrew Moore	Wilson
John Glenn Neal	Jefferson
Julius W. Phœnix	Greensboro
Howard Lafayette Pierce	Rocky Mount
Frank Allen Pounds	Concord
Ray Norman Rouse	Grifton
Everett Milton Senter	Kipling
John Charles Slocumb	Benson
Ben Lee Umstead	Stem, R. 1
Joseph Jeremiah Vereen	Little Pine, S. C.
William Herbert Whisnant	Shelby
Geitner Chamblee White	Mebane
Charles Russell Winecoff	Concord, R. 2
Algia Turner Young	Clayton, R. 1

SECOND-YEAR MECHANIC ARTS

Harry Grayson Goode	Rutherford College
Arthur Allen Loftin	Trenton
John White Moore	Mooresville
George Lewis Odom	Laurinburg
Bonner Lee Wilkinson	Belhaven, R. 1

FIRST-YEAR TEXTILE

Name	*Postoffice*
Robert Hughes Allison	Raleigh
John Archie Black	Shelby
Julian Walker Carpenter	Monroe
Arthur Fort	Kinston
Calvert Royall Hall	Wilmington
Milton Ray Harden	Burlington, R. 9
Malcolm Kemp Lee, Jr.	Monroe
Henry Grady Rollins	Lawndale
Lester Archie Saunders	Kings Mountain
Herbert A. Siegmund	Fieldale, Va.
Frank Stansbury	Greensboro
John Graham Webb	Concord

SECOND-YEAR TEXTILE

LeDewey Ellis Allen	Gibsonville
Laurence William Barrette	Fayetteville
Royall Albert Hand	Belmont
Isaac Lewis Langley	Barnwell, S. C.
Samuel Corum Pharr	Harrisburg, R. 2
Duncan L. Smith	St. Pauls, R. 3
Pelham Eugene Smith	Cooleemee

SPECIAL

Tao-Shen Foo	Tex.	Shanghai, China
Francis Marion Harper, Jr.	Chem.	Raleigh
Abel Kenneth Hewitt	Agr.	Hickory
(Mrs.) Charles Everett Myers	Agr.	Raleigh
Thomas Dugan Westfeldt	Agr.	Fletcher
(Mrs.) Thomas Dugan Westfeldt	Agr.	Fletcher
Donald Bower Wilson	Spanish	Raleigh

SPECIAL REHABILITATION STUDENTS

Name	*Course*	*Postoffice*
Benjamin Blaine Absher	Auto	Austin, R. 1
Roscoe Addison	Mech. Draft.	Durham, R. 6
Demetrio J. Araneta	Elec.	Atlanta, Ga.
George Elam Arney	Agr.	Lenoir, R. 5
Lewis Slocumb Autry	Agr.	Autryville, R. 1
Walter Carl Averitt	Agr.	Stedman
Mahlon Stanley Baggett	Agr.	Buckhorn, Va.
Alex. Frank Barbrey	M. E.	Goldsboro
Walter Lee Leon Barden	Agr.	Micro

Name	*Course*	*Postoffice*
William Hubart Barker	Poul.	Davidson, R. 2
Needham Boddy Barnes	Agr.	Goldsboro
Dyar Columbus Blalock	Agr.	Timberlake, R. 2
John Elisha Boone	Agr.	Pittsboro
Isaac Marshall Bradshaw	Agr.	Morganton, R. 1
Thomas Branch	Agr.	Kernersville, R. 4
John Belton Brasington	Tex.	Danville, Va.
Lorenzo Bruner Braswell	Agr.	Monroe, R. 2
Walter Moody Bray	Auto	Rockingham, R. 1
Charles Samuel Brooks	Auto	Bina
Herbert Mitchell Brown	Agr.	Denim Branch, Greensboro
James Arthur Bruce	Agr.	Randleman, R. 1
Thomas Newton Bryson	Agr.	Cullasaja
Henry O. Buckner	Poul.	Pineland, S. C., R. 1
Thomas C. Butler	Tex.	Burlington, R. 7
Ernest Fiddillie Capps	Agr.	Hendersonville, R. 4
Hoyle Benjamin Carpenter	Agr.	Forest City, R. 3
Clinton Brackitt Carter	Agr.	Reidsville, R. 2
Henry Lou Carter	Agr.	Ingold, R. 1
Claude Cornelius Cash	Agr.	Atlanta, Ga.
James Lee Cathey	Prac. Elec.	Mooresville
Benjamin Oliver Chatham	Agr.	Fairview, R. 1
All Charley Chrismon	Agr.	Brown Summit, R. 1
Claud Donald Church	Agr.	Brownwood
John Hoyte Cline	Agr.	Lawndale
John Conner	Agr.	Fairview
Paul Cook	Agr.	Elk Park
Andrew Garrald Crawley	Try-out	Raeford
Lacey Martin Crowell	Agr.	Mount Gilead, R. 3
Preston Alexander Daniels	Agr.	Columbia, S. C.
Thomas Daniels	Agr.	Culberson, R. 1
Percy Thomas Dark	Agr.	Siler City, R. 5
Harry Lee Davis	P. Plt. Opr.	Kinston
William Lee Davis	Agr.	Raleigh
Millard Charles Dawson	P. Plt. Opr.	Ulah
Shafter Denning	P. Plt. Opr.	Newton Grove, R. 2
Manuel David Dickerson	Auto	Durham
John Erwin Duckworth	Agr.	Morganton, R. 1
Andrew Osbon Eaker	Tex.	Shelby
Marion Gaston Eaker	Agr.	High Point
Riley Jerome Easter	Tex.	Lexington
Charlie Elliott	Agr.	Rocky Mount, R. 5
Basil Riggan Ellis	Agr.	Raleigh
Jerry Parker Elmore	Auto	Goldsboro, R. 5

Name	*Course*	*Postoffice*
Grady Evans	Agr.	West Asheville
William Marslender Evett	Agr.	Blounts Creek, R. 1
Fred Guy Fleming	Agr.	Creedmoor
Ben Lewis Flowers	Try-out	Fremont
Frank James Flynn	Agr.	Uree, R. 2
Foy Guy Fox	Auto	Gastonia, R. 4
Harry Francis Gardner	Machinist	Parmele, R. 1
Raymond L. Garner	Agr.	Newport
Charlie Irvin Gibson	Tex.	Henderson
Charles Duncan Gilchrist	Agr.	Cameron, R. 2
John William Gilley	Agr.	Pilot Mountain, R. 2
Turner Martin Goff	Farm Mech.	Rocky Mount, R. 5
Patrick Winslow Goodson	Agr.	Denver
Alvin Curtis Gray	Millwrighting	Chapel Hill, R. 1
James McKinley Gray	Agr.	Broadway
Lee Grissom	Mech.	Henderson
William Franklin Hackney	Agr.	Scotland Neck, R. 2
Thomas Alex. Harrington	Arch. Draw.	Broadway, R. 2
Bernie Pope Harris	Tex.	Henderson
Claude Harris	Agr.	State Road, R. 2
Roe Lindsay Harris	Agr.	Fairfield
Arthur Washington Heatherly	Agr.	Canton, R. 1
Thomas Barnett Heddon	Agr.	Highland
Levi Lannon Hedgepeth	Electro-Tech.	Greensboro
Edward Helms	Agr.	Monroe
Huston Henderson	Agr.	Jennings, R. 2
Alvin E. Herman	Poultry	Catawba
James Edgar Hicks	Agr.	Marion, R. 1
Henry Clay Hobbs	Tex.	West Durham
John Hobbs	Tex.	Durham
Haywood Witt Holt	Agr.	Raleigh, R. 3
William McPhail Holt	Farm Mech.	Sanford, R. 1
Troy Bascom Honeycutt	Tex.	Oakboro, R. 1
Hugh Tyner Hovis	Agr.	Lincolnton, R. 1
William McCoy Jefferson	Agr.	Washington
Willie Joines	Agr.	Amelia
Charley Corbitt Jolley	Farm Mech.	Henrietta
Andrew Jones, Jr.	Agr.	Catharine Lake, R. 1
Tillmon Washington Jones	Auto	Franklin
Willie Love Jones	Agr.	Kerr, R. 1
Henry Maston Keen	Engr.	Goldsboro
Jesse James Kelley	Agr.	Auburn
Herman Edgar Kennedy	Prac. Elec.	Sanford
Keith Dargan King	P. Plt. Opr.	Cheraw, S. C.

Name	*Course*	*Postoffice*
Hermon Gardner Lancaster	Agr.	Vanceboro, R. 2
Bennie Edgar Lewis	Agr.	Zebulon
Charles Lemuel Lewis	Agr.	Bostic, R. 4
Glaucus Winer Lewis	Agr.	Enfield, R. 1
Garland Lloyd	Auto	Maysville, R. 2
Thomas Murry Lloyd	E. E.	Durham
Donovan Bernard Lumsden	Heat., Vent., etc.	Raleigh
Lester Farrow McGee	Agr.	Angier, R. 1
Harvey Ernest McLaurin	Agr.	Fayetteville, R. 2
Neill James McMillan	Agr.	Manchester
Frank Donald Marcom	Prac. Elec.	Morrisville, R. 2
Abram Lennon Marshburn	Agr.	Tomahawk, R. 1
Jesse Ballard Martin	A. H.	Graham
Bert Mash	Auto	Othello
Fletcher Andrew Mason	Agr.	Black Mountain, R. 1
Lorenzo Dowell Massey	Agr.	Mount Olive, R. 7
Sidney Meares, Jr.	Auto	Chadbourn
Ernest Alfred Melin	Agr.	Stamford, Conn.
David Brasker Melton	Agr.	Monroe, R. 4
Jesse Clyde Merritt	Agr.	Rose Hill, R. 3
Harlie Abel Miller	Agr.	Lenoir, R. 2
Joseph Roger Miller	Agr.	Rocky Point, R. 1
Horace Montgomery	Agr.	Mineral Springs, R. 1
Alexander Moore, Jr.	Engr.	Charleston, S. C.
John Wheeler Moore	Agr.	Williamston, R. 2
Ransom David Mull	Auto	Morganton
John James Nance	Agr.	Richardson, R. 1
John Oscar Nelson	Auto	Asheboro
Clarence Page	Agr.	Barnesville, R. 1
David Russell Palmer	Agr.	Waynesville, R. 3
Irving Parsons	Try-out	Candor, R. 1
Marshall Leak Parsons	Arch. Engr.	Norwood
Claude Ferman Patterson	Arch. Draw.	Jackson Spgs., R. 2
Walter Herbert Peake	Agr.	Green Mountain
George Willis Peele	P. Plt. Opr.	Goldsboro
Herbert Pender	P. Plt. Opr.	Selma, R. 3
Jacob Phifer	Agr.	Kings Mountain
Walter Roderic Porter	Mech. Draft.	Rocky Mount
James William Potter	Agr.	La Grange, R. 1
Thamar Espron Propst	Poul.	Morganton, R. 4
Joshua Pulliam	Agr.	Roxboro
Emory Lee Ray	Agr.	State Road, R. 1
Gurna Anthony Richardson	Agr.	Randleman, R. 2
Howard Robertson	Tex.	Wendell, R. 2

Name	*Course*	*Postoffice*
William Welford Rogers	Arch. Dr.	Harris, R. 1
James Walter Rollins	Agr.	Randleman, R. 2
James Kelly Rosser	Prac. Elec.	Broadway, R. 1
Edgar Manton Satterthwaite	Agr.	Ransomville R. 1
Graham Lane Savage	Agr.	Clarkton, R. 3
Willie Henry Shearin	Agr.	Castle Hayne
Reid Banks Simpson	Agr.	Jonesboro, R. 3
Thomas Baxter Simpson	Agr.	Waxhaw, R. 2
Joseph Beecher Smart	Agr.	Union Mills, R. 3
Mark Henry Smith	Agr.	Kannapolis, R. 2
William Mullington Smith	Agr.	Whiteville, R. 1
Sam Smithwick	Auto	Kinston
Kelton Norman Snipes	Agr.	Marion
Walter Bascom Sprinkle	Agr.	Murphy, R. 1
Jestie William Stallings	Agr.	Gilkey
Isaac Henry Stiwinter	Agr.	Scroll
Grady Columbus Stone	High Sch. Subj.	Winston-Salem
John Edward Swaney	Auto	Greensboro, R. 6
Samuel Edmond Sykes	Auto	Spring Hope, R. 2
Robert Haile Taylor	Agr.	Idlewild
Harry Montgomery Teachey	Agr.	Wilmington, R. 2
Dallas M. Tickle	Auto	Welcome
Sir Walter Raleigh Triplett	Poul.	Purlear, R. 1
Augustus Turner	Agr.	Marion
Walter Albert Vann	Try-out	Rose Hill, R. 2
Francis Leon Venable	Agr.	Greensboro
John Craford Wadkins	Agr.	Entwistle
Harvey Walker	Agr.	Olin
Ulysses Grant Walker	Agr.	Auburn
Alphonse DeKalb Wallace	Agr.	Batesburg, S. C., R. 2
Seymore Ward	Agr.	Vineland, Star Route
Charles Aycock Warwick	Auto	Wilmington
Ernest Tillman Waters	Agr.	Wilmington
Ernest Edward Watkins	Agr.	Macon
Harvey Martin Watson	P. Plt. Opr.	Yuma
Ballon Mabry Watts	Agr.	Nakina
Charles Parish Weaver	Agr.	Durham
Peter Ancell Webb	Tex.	Winston-Salem
Chester Beauregard White	Agr.	Gliden
Charlie Montgomery Williams	Agr.	North Charlotte
Norwood Wade Williams	Agr.	McCullers, R. 1
Wiley Hinton Williams	Auto	Washington, R. 3
Elliotte Allen Williamson	Auto	Clinton, R. 1
Seward Johnson Wilson	Agr.	Spray

Name	*Course*	*Postoffice*
Vann D. Wright	Elec.	Troy
James Loge Young	P. Plt. Opr.	Mooresville

WINTER COURSE IN AGRICULTURE

Oscar Davis Alexander	Kannapolis, R. 1
Thomas Murphy Aycock	Elberon
Robert Henry Britt	Whiteville, R. 1
Kenneth Clifton Cathey	Charlotte, R. 5
Roger Festus Collins	Holly Springs, R. 2
Bruce Hill Davis	Charlotte, R. 7
Tomling B. Dennis	Albemarle, R. 1
William Gray	Raleigh
Cicero Ulysses Hinshaw	Raleigh
Nelson Lawrence Hudspeth	Yadkinville, R. 1
Calupt Tilden Jarvis	Straits
Gray Shoub Moore	Rural Hall, R. 2
Mary Elizabeth Moore (Mrs.)	Raleigh
George Brashears Mundy	Hayesville, R. 1
Thomas Edward Peoples	Elberon
John Henry Perry	Creedmoor, R. 1
Charlie Rich Pickett	Durham, R. 1
Isaac Jasper Price	Charlotte, R. 4
Ivey Curnellson Ritchie	New London, R. 1
Henry Alvord Scott	Haw River
John William Sharpe	Greensboro, R. 6
Grover Shaver	Albemarle, R. 2
Rufus Brown Staton	Flat Rock, R. 1
David Edwin Tucker	Guilford College, R. 1
Nathaniel Elton Watson	Lucama, R. 1
John Hamlet Williams	Garner, R. 2
Junius Roy Witherspoon	Cherryville, R. 2
George Timmon Wyatt	Penland

COURSE IN COTTON GRADING

Thomas Jesse Ballard	Morven
William Robert Bender	Pollocksville
Edgar Francis Bounds	Weldon
Richard Willis Brothers	Oriental
Williard Holden Darst	Raleigh
Robert B. Deal	Greensboro
William Henry Heath, Jr.	Snow Hill, R. 1
Marion Welch Heiss	Greensboro

Name	*Postoffice*
Vernon Ray Herman	Raleigh
Samuel White Hill	Raleigh
John Henry Lewis	Faison
Philip Sidney McMullan	Edenton
Harvey Blount Mann	State College Station, Raleigh
Elbert Donald Nalle	Sanford
Walter Jerman Pace	Maxton
Thomas Melvin Phillips	Raleigh, R. 1
James Owen Purnell	Franklinton
Patrick Percival Purnell	Franklinton
Cameron Ress Reynolds	Raleigh
Pleasant Demont Roseman	Cleveland
Kenneth Royster Smith	Raleigh
William John Smith, Jr.	Oriental
William Graham Tarpley	Wendell, R. 1
William Bartel Townsend	Red Springs
Aubrey Bryant Waddell	Raleigh
C. R. White	Rockingham
Rhett Youmans Winters	Raleigh

SUMMARY

By Classes

Graduates	39
Seniors	100
Juniors	168
Sophomores	195
Freshmen	264
Short Courses:	
First Year Agriculture	39
One Year Auto	11
First Year Mechanic Arts	35
Second Year Mechanic Arts	5
First Year Textile	12
Second Year Textile	7
Specials	7
Special Rehabilitation	187
Winter Course in Agriculture	28
Winter Course in Cotton Grading	27
Total	1124

By Courses

Agricultural, including short courses	312
Chemical	28
Civil Engineering	106
Electrical Engineering	161
Mechanical Engineering, including short courses	167
Textile, including short courses	154
Specials	7
Physics and Mathematics (Graduates)	2
Special Rehabilitation	187
Total	1124

Summer School 671

REGISTER OF GRADUATES

Name	*Degree*	*Address*
CLAUD SHUFORD ABERNETHY	B.E. 1916	Hickory, N. C.
Member of firm, Abernethy Hardware Co.		
DURANT STEWART ABERNETHY	B.E. 1906	Washington, D. C.
Vice President, Southern Railway Short Lines		
LEROY FRANKLIN ABERNETHY	B.Agr. 1905	Hickory, N. C.
Cashier Consolidated Trust Co.		
EDWARD ANDREWS ADAMS, JR.	B.E. 1919	Charlotte, N. C.
Manager Sales Department, Southern Engineering Co.		
NELSON ADAMS	B.E. 1904	McColl, S. C.
Farmer		
HAYWOOD LEWIS ALDERMAN	B.E. 1904	Greensboro, N. C.
President, Bagley & Alderman, Inc., Printing and Advertising, Vice President of Gayle-Ireland Motor Co.		
HENRY MILTON ALEXANDER	B.E. 1915	Camp Stotsenburg, Pampanga, P. I.
First Lieutenant, 9th Cavalry, U. S. Army		
KEMP ALEXANDER	B.E. 1900	Asheboro, N. C.
Superintendent, Acme Hosiery Mills		
NEILY ORMOND ALEXANDER	B.S. 1912	R. 17, Matthews, N. C.
Farmer		
WILLIAM DAVIDSON ALEXANDER, JR.	B.S. 1899	Charlotte, N. C.
Consulting Drainage Engineer		
BONVA CLOSSON ALLEN	B.E. 1918	Moore, Pa.
Engineering Department, Westinghouse Electric and Manufacturing Co.		
DANIEL ALLEN	B.S. 1896	Raleigh, N. C.
Farmer and Real Estate Dealer		
GEORGE GILDEROY ALLEN	B.E. 1906	Kannapolis, N. C.
Assistant Superintendent, Cannon Mills		
LESLIE LYLE ALLEN	B.E. 1900	Spartanburg, S. C.
Cotton Merchant		
ROBERT WILSON ALLEN	B.E. 1893	Wadesboro, N. C.
County Superintendent of Schools		
WILLIAM GASTON ALLEN	B.E. 1920	Dahlgren, Va.
Naval Proving Ground, United States Government		
LEWIS ALLEN AMMON	B.S. 1913	Mecosta, Mich.
Dairyman		
CHARLES SIDNEY ANDREWS	B.E. 1914	Newport News, Va.
Draftsman, with Newport News Shipbuilding and Dry Dock Co.		
GRAHAM HUDSON ANTHONY	B.E. 1914	Hartford, Conn.
Vice President and Secretary, Allen Manufacturing Co.		
OLIVER STANHOPE ANTHONY	B.E. 1916	Shelby, N. C.
Real Estate Dealer		
JOHN CAMILLUS APP	B.S. 1908	Charleston, W. Va.
Chemist, United States Public Service Reserve		
JOHN ALLEN AREY	B.S. 1909	Raleigh, N. C.
With N. C. Extension Service		
GILBERT LUTHER ARTHUR, JR.	B.S. 1913	Raleigh, N. C.
Chemist, State Department of Agriculture		
JOHN W. ARTZ	B.S. 1917	Middleboro, Ky.
Union Tanning Co.		
DORSEY FROST ASBURY	B.S. 1898	Washington, D. C.
Office, National Savings and Trust Building		
GEORGE PAGE ASBURY	B.E. 1906	Charlotte, N. C.
Office Engineer, Southern Railway System (Lines East)		
SAMUEL ERSON ASBURY	B.S. 1893	College Station, Tex.
M.S. 1896. Assistant State Chemist		
SYDNEY WOODWARD ASBURY	B.E. 1904	Wallville, Md.
Farmer		

Name	*Degree*	*Address*
LEWIS CARROLL ATKISSON	B.E. 1915	Greensboro, N. C.
With H. F. Livermore Company, Boston, Mass.		
BASCOM OTTO AUSTIN	B.E. 1914	Wilkinsburg, Pa.
Design Engineer, Westinghouse Electric and Manufacturing Co.		
WILBURN CLEGG AUSTIN	B.E. 1920	North Charlotte, N. C.
Heating Engineer and Draftsman, The Grinnell Co., Inc.		
GEORGE GANZER AVANT	B.E. 1918	Wilmington, N. C.
Efficiency and Combustion Engineer, Tidewater Power Co.		
JOHN WILLIAM AVERA	B.S. 1917	Winston-Salem, N. C.
With B. F. Huntley Furniture Co.		
ROBERT JAMES AVERY	B.Agr. 1905	Morganton, N. C.
Railroad Contractor		
ROBERT KENNETH BABINGTON	B.E. 1910	Charlotte, N. C.
With Southern Bell Telephone and Telegraph Co.		
CHARLES ALBION BACHE	B.E. 1913	Merritt, Fla.
Orange Grower and Real Estate Operator		
OSCAR LUTHER BAGLEY	B.S. 1905	Goldsboro, N. C.
Salesman, Wholesale Groceries		
EUGENE CLEVELAND BAGWELL	B.E. 1904	Savannah, Ga.
Superintendent, Seaboard Air Line Railway		
CLARE RUSSELL BAILEY	B.S. 1914	Chadbourn, N. C.
Farmer		
HUGH MARCELLUS BAILEY	B.S. 1914	Woodleaf, N. C.
Farmer		
ROGER MOORE BAILEY	B.S. 1913	Elm City, N. C.
Member of firm, John L. Bailey & Sons		
WILLIAM BAILEY	B.E. 1917	Raleigh, N. C.
With Carolina Power and Light Co.		
WADE VANCE BAISE	B.E. 1920	Raleigh, N. C.
Draftsman, Computer, N. C. State Highway Commission		
BRUCE CRAYTON BAKER	B.E. 1920	Lancaster, S. C.
Assistant to Superintendent, Lancaster Cotton Mills		
CHARLES VERNON BAKER	B.E. 1916	Raleigh, N. C.
State Highway Commission		
FRED ALLEN BAKER	B.E. 1916	Charlotte, N. C.
Junior Engineer, Southern Bell Telephone and Telegraph Co.		
FRANK OSCAR BALDWIN	B.S. 1908	Richmond, Va.
Supervisor of Settling Basins and Laboratory, Richmond City Waterworks		
WILLIAM HERBERT DOUGHTY BANCK	B.E. 1908	Wilmington, N. C.
Civil Engineer		
IRA WILSON BARBER	B.S. 1899	Mount Airy, N. C.
Engineer		
JAMES CLAUDIUS BARBER	B.E. 1904	Barber, N. C.
Farmer		
TOLLIE CHESTER BARBER	B.E. 1911	Mount Airy, N. C.
Superintendent, The Mayo Mills		
WILLIAM WALTON BARBER	B.E. 1904	Ammon, Va.
Farmer		
FLETCHER HESS BARNHARDT	B.E. 1901	Phœnixville, Pa.
C.E. 1919. The Phœnix Bridge Co.		
JAMES MONROE BARNHARDT	B.S. 1918	Urbanna, Va.
Farmer		
WILLIAM ALEXANDER BARRETT	B.E. 1904	Bremerton, Wash.
With United States Navy		
GEORGE FRANCIS BASON	B.E. 1908	Ithaca, N. Y.
M.E. 1916, Cornell. Instructor, Cornell University		
JERE WILSON BASON	B.S. 1916	Swepsonville, N. C.
Teacher of Agriculture		
HERBERT SCANDLIN BATTIE	B.E. 1907	Greensboro, N. C.
District Sales Manager, Merchant Calculating Machine Co., Emeryville, P. O., Oakland, Calif.		

Name	*Degree*	*Address*

JOHN ROBIN BAUCOM ..... B.S. 1917 ..... R. 2, Raleigh, N. C.
Farmer

SAMUEL OTTO BAUERSFELD, JR. ..... B.S. 1919 ..... Hamlet, N. C.
Orchardist

THOMAS LEVINGSTON BAYNE, JR. ..... B.S. 1914 ..... Ithaca, N. Y.
Assistant in Rural Education, Cornell University

WALTER ROBERT BAYNES ..... B.S. 1920 ..... Columbus, Ohio
Junior Class Veterinary Medicine, Ohio State University

JOHN MANN BEAL ..... B.S. 1911 ..... Agricultural College, Miss.
M.S. 1913, Miss. A. and M. Professor of Botany and Forestry, Miss. A. and M. College; Botanist for Miss. Agr. Experiment Station

MARVIN EDDLEMAN BEATTY ..... B.E. 1916 ..... R. 5, Box 18, Charlotte, N. C.
Southern Power Company

JAMES CLAUDIUS BEAVERS ..... B.Agr. 1906 ..... Guilford College, N. C.
Farmer, Poultryman, and Agricultural Writer

SIDNEY HAMILTON BECK ..... B.S. 1898 ..... Not located this year

JOHN LELAND BECTON ..... B.E. 1908 ..... Wilmington, N. C.
C.E. 1913. Civil Engineer

HARWOOD BEEBE ..... B.E. 1908 ..... Spartanburg, S. C.
Consulting Engineer

THOMAS AMBROSE BELK ..... B.S. 1918 ..... Mount Holly, N. C.
Farmer

CHARLES EDWARD BELL ..... B.S. 1911 ..... Gainesville, Fla.
Chemist, Florida Experiment Station, University of Florida

FREDERICK NEIL BELL ..... B.E. 1918 ..... East Pittsburgh, Pa.
Engineer, Westinghouse Electric and Manufacturing Co.

NEEDHAM ERIC BELL ..... B.S. 1906 ..... Montgomery, Ala.
Jennison & Co. (Inc.) of Birmingham, Farm Loans Division

JAY LANG BENBOW ..... B.S. 1918 ..... Oak Ridge, N. C.
Commercial Honey Producer and Farm Manager

JOHN SAMUEL BENNETT ..... B.E. 1916 ..... Chapel Hill, N. C.
Superintendent of Power, University of North Carolina

WILLIAM OSBORNE BENNETT ..... B.E. 1901 ..... Maxton, N. C.
Manager, Elba Manufacturing Co.

ROBERT LINN BERNHARDT ..... B.S. 1900 ..... Salisbury, N. C.
Secretary-Manager, Salisbury Hardware and Furniture Co. and Breeder of Shorthorn Cattle

LESLIE GRAHAM BERRY ..... B.E. 1900 ..... Charlotte, N. C.
President, Southern Engineering Co.

WILMER ZADOCK BETTS ..... B.E. 1918 ..... Raleigh, N. C.
With Bridge Department, State Highway Commission

HERMON VON BIBERSTEIN ..... B.E. 1914 ..... Charlotte, N. C.
Draftsman, R. C. Biberstein, Mill Architect and Engineer

JOHN HENDERSON BIRDSONG ..... B.S. 1899 ..... Chicago, Ill.
Chief Chemist and Metallurgist, the National Malleable Castings Co.

JOB PITTMAN BIVENS ..... B.E. 1907 ..... Gastonia, N. C.
Secretary and Treasurer, Michael & Bivens, Inc.

JAMES ADRIAN BIZZELL ..... B.S. 1895 ..... Ithaca, N. Y.
M.S. 1900. Ph.D. 1903, Cornell University. Professor of Soil Technology

FRED MCCULLOUGH BLACK ..... B.E. 1910 ..... Milwaukee, Wis.
Salesman, Westinghouse Electric and Manufacturing Co.

JAMES CYRUS BLACK ..... B.E. 1920 ..... Davidson, N. C.

KENNETH LEON BLACK ..... B.E. 1906 ..... Richmond, Va.
President and Treasurer of K. L. Black & Co., Inc., Engineers and General Contractors

WILLIAM LAMAR BLACK ..... B.E. 1908 ..... Key West, Fla.
With South Florida Contracting Company

ENOS CLARKSON BLAIR ..... B.S. 1914 ..... Raleigh, N. C.
Extension Agronomist, N. C. Agricultural Experiment Station

TYSON YATES BLANTON ..... B.S. 1917 ..... Kelso, Wash.

BEVERLY MOSS BLOUNT ..... B.E. 1915 ..... Cary, N. C.
Department of Science, Cary High School

Name	*Degree*	*Address*
George Benjamin Blum	B.S. 1918	Lexington, N. C.
County Agent, Davidson County		
William Morton Bogart	B.E. 1903	Charlotte, N. C.
Chief Engineer, General Fire Extinguisher Co.		
Allison Hodges Bond	B.E. 1912	Columbus, Ohio
General Superintendent, The Kilbourne and Jacobs Manufacturing Co.		
Thomas Sawyer Bond	B.E. 1910	Palestine, Tex.
Assistant Chief Engineer, International and Great Northern Railway		
Leslie Norwood Boney	B.E. 1903	Wilmington, N. C.
Architect		
Fred Wilhelm Bonitz	B.E. 1901	Baltimore, Md.
With Engineering Department of Standard Oil Co.		
John Henry William Bonitz	B.E. 1920	Wilmington, N. C.
Supervising Engineer, H. E. Bonitz, Architect. Secretary, Beach Water Co.		
James Shepherd Bonner	B.E. 1916	Nashville, Tenn.
Exchange Engineer, Cumberland Telephone and Telegraph Co.		
William David Boseman	B.E. 1902	Rocky Mount, N. C.
Farmer		
Barrett Woodward Boulware	B.E. 1917	Carbonton, N. C.
Zolly Mosby Bowden	B.E. 1901	Plant City, Fla.
Electrician, Coronet Phosphate Co.		
Edwin Dennis Bowditch	B.S. 1913	R. 1, Toecane, N. C.
Farmer		
Roy Bowditch	B.E. 1910	Norton, Va.
Electrical Engineer, West Virginia Engineering Co.		
Alan Thurman Bowler	B.E. 1912	Raleigh, N. C.
With W. S. Boyd, Republic Trucks		
Rodney Law Boylin	B.S. 1916	Not located this year
Asa Gray Boynton	B.E. 1908	Blowing Rock, N. C.
Landscape Architect		
Zeb Boyce Bradford	B.E. 1917	Kannapolis, N. C.
With Cannon Manufacturing Co.		
Carl Ray Bradley	B.E. 1910	St. Louis, Mo.
Electrical Engineer (Large Motor Division), Wagner Electric Manufacturing Co.		
Clarence Anderson Brame	B.S. 1919	Kenly, N. C.
Farmer		
James Washington Brawley	B.S. 1895	Greensboro, N. C.
Vice President and Treasurer, Real Estate and Trust Co.		
John Benjamin Bray	B.E. 1911	Raleigh, N. C.
Commissioner of Public Works, City of Raleigh		
Victor Winfred Breeze	B.E. 1914	Charlotte, N. C.
With Southern Engineering Company		
Thomas Johnson Brevard	B.S. 1910	Not located this year
Charles Meekins Brickhouse	B.S. 1914	Kinston, N. C.
Farm Demonstration Agent		
William Staley Bridges	B.E. 1919	Raleigh, N. C.
Instructor in Auto Mechanics, N. C. State College		
Hermon Burke Briggs	B.E. 1913	Seattle, Wash.
M.E. 1916. Kaiser Paving Co.		
Clay Dwight Brittain	B.E. 1916	Savannah, Ga.
Signal Inspector, Union Station, Seaboard Air Line Railway		
Ralph Brooks	B.S. 1916	Alliance, N. C.
Farmer		
Thomas Westmore Brooks	B.E. 1916	Hilton Village, Va.
Engineering Department, Newport News Shipbuilding and Dry Dock Co.		
Benjamin Alexander Broom	B.E. 1905	Sioux City, Iowa
Consulting Mechanical and Electrical Engineer		
Cecil Dewitt Brothers	B.E. 1909	New York, N. Y.
160 Front Street		

Name	*Degree*	*Address*

BEDFORD JETHRO BROWN.....B.E. 1901.....Charlotte, N. C.
Superintendent of Meter Department, Southern Power Co.

BRYCE BENJAMIN BROWN.....B.E. 1918.....Schenectady, N. Y.
Testing Department of General Electric Company

CLAYTON EDWARD BROWN.....B.E. 1912.....Washington, D. C.
Assistant Engineer, Southern Railway

FRANK HAMILTON BROWN.....B.Agr. 1908.....Cullowhee, N. C.
Teacher of Science and Agriculture, Cullowhee Normal and Industrial School

JOEL EDWARD BROWN.....B.S. 1911.....Grimes, Cal.
With Standard Oil Company

JAMES HOWARD BROWN.....B.S. 1911.....Rich Square, N. C.
M.S. 1912. D.V.M. 1914, Kansas City Veterinary College. Veterinarian

WILLIAM BACHMAN BROWN.....B.E. 1911.....Charlotte, N. C.
Maintenance of Way Department, Southern Railway

JOSEPH BRANDON BRUNER.....B.S. 1915.....Los Angeles, Cal.
1231 Fourth Avenue

STEPHEN COLE BRUNER.....B.S. 1912.....Santiago de las Vegas, Cuba
Chief, Department of Plant Pathology, Estacion Agronomica de Cuba

THOMAS KINCAID BRUNER.....B.E. 1910.....Memphis, Tenn.
Order and Traffic Man, The Proctor & Gamble Distributing Co.

CARNEY JOHN BRYAN.....B.E. 1907.....St. Andrews, Fla.
C. J. Bryan & Co., Wholesale Fish Dealers

GUY KEDAR BRYAN.....B.E. 1911.....Tampa, Fla.

JOHN HARVEY BRYAN.....B.E. 1908.....New York, N. Y.
M.E. 1913. With Macondray & Co.

KIT BRYAN.....B.E. 1911.....Catharine Lake, N. C.

DALLAS MARION BUCHANAN.....B.S. 1920.....Durham, N. C.
Tobacco Buyer, Liggett & Myers Tobacco Co.

JAMES RAMSEY BUCHANAN.....B.E. 1914.....Sylva, N. C.
Electrical Engineer for Armour & Co., Acid Plant and Tannery

ELTON ELROY BUCK.....B.E. 1910.....Not located this year

GEOGRE CLEVELAND BUICK.....B.S. 1916.....Castalia, N. C.
Superintendent, Vocational Training School

JOSEPH SAMUEL BUFFALOE.....B.S. 1897.....Garner, N. C.
Physician

HARLEY WILSON BULLARD.....B.S. 1914.....Aulander, N. C.
Teacher of Agriculture, Farm-life School

WALTER AUSTIN BULLOCK.....B.S. 1895.....Red Springs, N. C.
Farmer

WILLIAM CAREY BUNCH.....B.S. 1920.....Edenton, N. C.
Assistant in Peanut Mill, Farmers' Storage Co.

JAMES HARRY BUNN.....B.E. 1900.....Henderson, N. C.
Superintendent, Henderson Cotton Mills and Croatan Spinning Mills

NOAH BURFOOT, JR.....B.E. 1917.....Elizabeth City, N. C.
Superintendent, Pasquotank Hosiery Mills

WILLIAM BRYANT BURGESS.....B.E. 1908.....Norfolk, Va.
Draftsman, Electrical Chargeman, Government Navy Yard, Norfolk

GEORGE EDWARD BUSH.....B.E. 1919.....Akron, Ohio
Head of Fabric Department, Firestone Tire and Rubber Co.

WILLIAM ANDERS BUYS.....B.E. 1906.....Belhaven, N. C.
Civil Engineer, the Interstate Cooperage Co., and Assistant to Manager

VON PORTER BYRUM.....B.E. 1911.....R. 1, Catawba, N. C.
Station Superintendent, Southern Power Co., Lookout Shoals Station

BRICE LEGRIER CALDWELL.....B.S. 1913.....Vicksburg, Miss.
District Chemist, The Refuge Cotton Oil Co.

ROBERT OLIN CALDWELL.....B.S. 1914.....R. 1, Concord, N. C.
Farmer

WALTER GRAHAM CALDWELL.....B.S. 1914.....Jonestown, Miss.
Farm Manager for Mrs. M. M. Hood

Name	*Degree*	*Address*
LINDSAY FERGUSON CARLETON	B.E. 1907	St. Louis, Mo.
Electric Department Manager, Johns-Manville, Inc.		
CLAUDIUS LEROY CARLTON	B.E. 1916	Tulsa, Okla.
Sales Engineer, Foamite Firefoam Co.		
JOHN CLINE CARPENTER	B.E. 1915	Greensboro, N. C.
Resident Engineer, N. C. State Highway Commission		
JOHN SAMUEL PINKNEY CARPENTER	B.E. 1903	Philadelphia, Pa.
Treasurer of the Mauney-Steel Co., Cotton Yarns		
JOHN WILLIAM CARROLL	B.S. 1897	Wallace, N. C.
Physician		
ALMON HILL CARTER	B.S. 1916	Wallace, N. C.
Farmer		
JOHN MANN CARTER	B.E. 1915	Lynchburg, Va.
President, National Paint and Manganese Co.		
HENRY BROZIER CARTWRIGHT	B.E. 1905	Jacksonville, Fla.
District Engineer, Seaboard Air Line Railway Co.		
HENRY ROY CATES	B.S. 1911	Atlanta, Ga.
Crop Investment Department, Hartford Fire Insurance Co.		
JUNIUS SIDNEY CATES	B.S. 1902	R. 1, Rosslyn, Va.
M.Agr. 1904. Ph.D., American University, 1915. Agricultural Journalist		
JOHN SUMMERELL CHAMBERLAIN	B.S. 1920	Raleigh, N. C.
Farmer		
WILLIAM MILLER CHAMBERS	B.E. 1905	Maben, W. Va.
Payroll Man, W. M. Ritter Lumber Co.		
JAY VICTOR CHAMPION	B.E. 1916	Worcester, Mass.
Department Superintendent, Geaton & Knight Manufacturing Co.		
WILLIAM CLAYBORNE CHEEK	B.E. 1920	Buffalo, N. Y.
Student Engineer, Worthington Pump and Machinery Corporation		
HARPER NICHOLSON CHERRY	B.S. 1918	Vanceboro, N. C.
LOUIS GORHAM CHERRY	B.E. 1916	Raleigh, N. C.
MARK HOPKINS CHESBRO	B.Agr. 1906	Kelowna, B. C.
Pruning School Instructor, Provincial Department of Agriculture		
CONNER CALHOUN CLARDY	B.E. 1906	San Diego, Calif.
Electrical Engineer, C. C. Clardy & Co.		
CHARLES EDWARD CLARK	B.S. 1897	Rocky Mount, N. C.
Assistant Director, Edgecombe Test Farm		
CLETE WALTON CLARK	B.S. 1916	Castleberry, Ala.
Farmer		
DAVID CLARK	B.E. 1895	Charlotte, N. C.
M.E. 1896; C.E. 1897. Owner and Editor, *Southern Textile Bulletin*. President, Highways and Industries		
JAMES DUNCAN CLARK	B.S. 1906	Tampa, Fla.
President, Peninsular Paper Co.		
JOHN WASHINGTON CLARK	B.E. 1906	West Durham, N. C.
B.E. (Tex.) 1907. Superintendent, Erwin Bleaching and Finishing Plant		
THORNE MCKENZIE CLARK	B.E. 1909	Lincolnton, N. C.
Treasurer and General Manager, Anderson Cotton Mills		
WALTER CLARK, JR.	B.E. 1903	Charlotte, N. C.
LL.B. 1905; LL.M. 1906. Lawyer		
WM. ALEXANDER GRAHAM CLARK	B.S. 1897	Washington, D. C.
M.E. 1899; M.E. Cornell University, 1900. Textile Expert to Tariff Commission		
SAMUEL HERBERT CLARKE	B.E. 1906	Baltimore, Md.
With H. Clarke & Sons, Inc., Manufacturing Chemists		
HENRY CALEB CLAY	B.E. 1911	Eagle Butte, Mont.
Ranchman		
WILEY THEODORE CLAY	B.E. 1906	Rio de Janeiro, Brazil
M.E. 1910. Board of Missions, M. E. Church, South		
AMOS BAXTER CLEMENT	B.E. 1913	Raleigh, N. C.
With Crowder Manufacturing Co.		

Name	*Degree*	*Address*
George Latta Clement	B.S. 1919	Asheville, N. C.
Manager, Elk Mountain Orchard Co.		
William Randolph Clements	B.E. 1913	Dayton, Ohio
Sales Engineer, The Master Electric Co.		
Ambrose Schenck Cline	B.S. 1917	Wenona, N. C.
Assistant Director, Branch Experiment Station		
Franklin Dewey Cline	B.E. 1920	Durham, N. C.
Asphalt Foreman, R. G. Lassiter & Co.		
Edward Lamar Cloyd	B.E. 1915	Raleigh, N. C.
Instructor, N. C. State College		
Edwin Lacy Coble	B.S. 1914	Raleigh, N. C.
Owner, firm of J. L. O'Quinn Co., Florists		
Robert Baxter Cochran	B.E. 1902	East Norwood, Ohio
With Allis-Chalmers Manufacturing Co., Bullock Works		
James Kirk Coggin	B.S. 1920	Cary, N. C.
Teacher of Agriculture, State Department of Vocational Education, Observation School, Cary, N. C.		
Anson Elikem Cohoon	B.S. 1898	Elizabeth City, N. C.
Farmer		
John Eliot Coit	B.Agr. 1903	Los Angeles, Calif.
Consulting Horticulturist		
Thomas Alexander Cole	B.S. 1913	Carthage, N. C.
Farmer and Mill Man		
John Calhoun Collier	B.E. 1916	West Allis, Wis.
With Allis-Chalmers Manufacturing Co.		
Paul Collins	B.S. 1901	Philadelphia, Pa.
3314 Race Street		
William Thomas Combs	B.E. 1918	Washington, D. C.
Junior Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey		
Guy Winston Commander	B.S. 1915	R. 4, Berkley, Va.
Truck Farmer		
Henry Bacon Constable	B.S. 1915	Not located this year
Cecil Edwards Cooke	B.S. 1920	Rockingham, N. C.
Diggs' Farm		
Charles Kearney Cooke, Jr.	B.E. 1918	Louisburg, N. C.
Highway Engineer		
Everett Hanson Cooper	M.S. 1916	Wilson, N. C.
With Export Leaf Tobacco Co.		
James Wesley Cooper	B.E. 1919	Henderson, N. C.
Assistant Superintendent, Harriet Cotton Mills		
John Downey Cooper	B.E. 1911	Henderson, N. C.
Superintendent, Harriet Cotton Mills Nos. 2 and 3		
Samuel Allen Cooper	B.S. 1920	College Park, Md.
Extension Service, Maryland University		
George Washington Corbett, Jr.	B.E. 1895	R. 2, Currie, N. C.
Lumberman and Merchant		
William S. Corbitt	B.E. 1916	Henderson, N. C.
With Corbitt Motor Truck Co.		
Charles Edward Corpening	B.E. 1894	R. 2, Lenoir, N. C.
Farmer and Lumber Dealer		
Milton Lee Correll	B.S. 1916	Not located this year
Edward Livingston Cotton	B.E. 1911	Badin, N. C.
Proprietor, Meat Market and Grocery Store		
Llewellyn Hill Couch	B.E. 1908	Raleigh, N. C.
Operating Manager, Cumberland Railway and Power Co.		
Walter Miller Cowles	B.S. 1909	Pittsburgh, Pa.
With Frost-Morton Motor Car Co.		
David Cox	B.E. 1894	Norfolk, Va.
Civil Engineer and Timber Dealer and Estimator		

Name	*Degree*	*Address*
DAVID DAVIES COX	B.E. 1914	Ensley, Ala.
Tennessee Coal, Iron, and Railroad Co.		
DUNCAN ARCHIBALD COX	B.S. 1906	Rowland, N. C.
Manager, Hub Hardware Co.		
GEORGE CHANDLER COX	B.E. 1917	Raleigh, N. C.
Instructor, Electrical Department, N. C. State College		
JOHN WILLIAM COX	B.E. 1915	Bagley, N. C.
Junior Hydrographic and Geodetic Engineer, U. S. Coast Survey		
SAINT JOHN COX	B.E. 1914	Ensley, Ala.
Instrument Engineer, Sloss-Sheff. Steel and Iron Co.		
FRANCIS EDWIN COXE	B.E. 1917	Perth Amboy, N. J.
Electrical Research Laboratory, Standard Underground Cable Co.		
LELAND MIOT CRAIG	B.E. 1914	Charlotte, N. C.
Vice President, Southern Engineering Co.		
SHERMAN GRADY CRATER	B.S. 1916	Raleigh, N. C.
Educational Representative, J. B. Lippincott Co.		
JOHN BENNETT CRAVEN	B.S. 1913	Chicago, Ill.
Superintendent, Peoples Gas, Light, and Coke Co.		
WILLIAM LOIS CRAVEN	B.E. 1901	Raleigh, N. C.
Bridge Engineer, State Highway Commission		
SIDNEY MOTT CREDLE	B.E. 1916	Tarboro, N. C.
Civil Engineer		
WOODFIN GRADY CREDLE	B.S. 1914	R. 2, Swan Quarter, N. C.
Farmer		
CHARLES LESTER CREECH	B.S. 1903	Winston-Salem, N. C.
Sales Manager, J. C. Spach Wagon Works		
HORACE DOWNS CROCKFORD	B.S. 1920	Charlotte, N. C.
With F. S. Royster Guano Co.		
ALEXANDER DOANE CROMARTIE	B.Agr. 1906	Garland, N. C.
Farmer		
RICHARD OLIVER CROMWELL	M.S. 1916	Chicago, Ill.
A.B. 1912; Ph.D. 1918, University of Nebraska. In Charge of Crop Reporting and Statistics Bureau, E. W. Wagner & Co. (Stocks, Bonds, Grain, etc.), 208 South LaSalle St.		
WILLIAM HENRY CROW	B.E. 1910	Monroe, N. C.
Merchant		
RAYMOND CROWDER	B.E. 1915	Raleigh, N. C.
President, Garage Equipment Co. and Crowder Manufacturing Co.		
RUSSELL ALEXANDER CROWELL	B.S. 1918	Acton, N. C.
Farmer		
CHARLES LEE CRUSE	B.S. 1912	Statesville, N. C.
Veterinarian		
FELIX GRAY CRUTCHFIELD	B.E. 1901	Philadelphia, Pa.
5015 Chester Ave.		
EUGENE ENGLISH CULBRETH	B.E. 1903	Raleigh, N. C.
With Commercial National Bank		
HUGH MCCOLLUM CURRAN	B.S. 1898	Bahia, Brazil
Forester, Care of U. S. Consul		
LISTON LLOYD DAIL	B.S. 1913	Ensley, Ala.
Chemist, Tennessee Coal, Iron, and Railroad Co.		
DALLAS THORNTON DAILY	B.E. 1915	Portsmouth, Va.
Assistant Engineer, Valuation Department, S. A. L. Railway		
WALTER LEE DARDEN	B.E. 1903	Norfolk, Va.
Engineer of Buildings, Seaboard Air Line Railway		
JOSEPH FRANK DAVIDSON	B.E. 1909	Pedro Miguel, C. Z.
Pacific Locks, Panama Canal		
SAMUEL FREDERICK DAVIDSON	B.S. 1914	Jacksonville, N. C.
North Carolina Department of Agriculture		
CHARLES WEBB DAVIS	B.E. 1917	Maben, W. Va.
Instrumentman, Virginian Railway		

Name	*Degree*	*Address*
PAUL DEXTER DAVIS	B.E. 1913	Durham, N. C.
Civil Engineer		
ROBERT VERNON DAVIS	B.E. 1916	Atlanta, Ga.
Engineer, Southern Bell Telephone and Telegraph Co.		
WILLIAM ANDERSON DAVIS	B.S. 1918	Lucama, N. C.
Soil Survey, N. C. Department of Agriculture		
WILLIAM EARLE DAVIS	B.E. 1910	Connelly Springs, N. C.
Electrician, Connelly Springs Light and Power Co.		
WILLIAM HURD DAVIS	B.E. 1911	Badin, N. C.
Maintenance Engineer, Electrical Department, Tallassee Power Co.		
WILLIAM PRESSLEY DAVIS	B.E. 1917	Weldon, N. C.
Highway Engineer, Halifax County		
CLAUD COUNCIL DAWSON	B.E. 1908	Cramerton, N. C.
Superintendent, Mays Mills, Inc.		
THOMAS THEODORE DAWSON	B.E. 1910	Durham, N. C.
Assistant Engineer, City Engineering Department		
ALBERT GEORGE DAY	B.E. 1917	Charleston, W. Va.
Electrical Engineer, U. S. Naval Ordnance Plant		
RALPH CAMPBELL DEAL	B.E. 1912	Clifton Forge, Va.
With Virginia Western Power Co.		
WILLIAM SAMUEL DEAN	B.E. 1909	Roanoke Rapids, N. C.
Cotton Buyer, Roanoke Mills Co. and Rosemary Manufacturing Co.		
LEONIDAS POLK DENMARK	B.E. 1915	Raleigh, N. C.
Grant Clerk, Office of Secretary of State		
THOMAS MARVIN DENSON	B.E. 1919	High Point, N. C.
With State Highway Commission		
ERNEST COFIELD DERBY	B.E. 1912	Fayetteville, N. C.
City Engineer		
LOUIS REINHOLD DETJEN	M.S. 1911	Newark, Del.
Associate Professor of Horticulture, Delaware State College		
MOSES MOORE DEW	B.E. 1920	Columbus, Ohio
Veterinary Student, Ohio State University		
EDWIN SEXTON DEWAR	B.S. 1911	Raleigh, N. C.
Assistant Chemist, North Carolina Department of Agriculture		
JOSEPH CHARLES DEY	B.E. 1906	Not located this year
JUNIUS FRANKLIN DIGGS	B.S. 1903	Rockingham, N. C.
Planter and Merchant		
HUGH WOODY DIXON	B.S. 1919	Jamestown, N. C.
Agricultural Teacher, Jamestown Farm-life School		
WILLIAM SERGEANT DIXON, JR.	B.E. 1918	Sioux City, Iowa
Student in Automobile and Tractor School		
LEROY DOCK	B.S. 1920	Cleveland, Tenn.
Orchard Manager, P. J. A. Berckmans, Jr.		
WILLIAM CARTER DODSON	B.E. 1917	Charlotte, N. C.
Technical Representative, Atlantic Dyestuff Co.		
MINOR CECIL DONNELL	B.S. 1917	R. 4, Greensboro, N. C.
Farmer		
ARCHIE JAY DOOLITTLE	B.E. 1914	Passaic, N. J.
Engineer, Portable Machinery Co., Inc.		
CARLTON O'NEAL DOUGHERTY	B.E. 1909	North, S. C.
Farmer		
MCNEELY DUBOSE	B.E. 1912	Badin, N. C.
E.E. 1920. Assistant Electrical Superintendent, Tallassee Power Co.		
FREDERICK EMMETT DUCEY	B.S. 1918	Columbus, Ohio
Senior Division, R. O. T. C., Veterinary Department, Ohio State University		
FRED. ATHA DUKE	B.E. 1909	Portsmouth, Va.
Assistant Engineer, Seaboard Air Line Railway		
ROBERT HOBSON DUKE	B.E. 1920	Worcester, Mass.
Student, Worcester Polytechnic Institute		

Name	*Degree*	*Address*
ALVAH DUNHAM	B.S. 1919	Raleigh, N. C.
Graduate Student, N. C. State College		
JAMES LEONIDAS DUNN	B.E. 1910	Scotland Neck, N. C.
Agricultural Representative, North Carolina, E. I. DuPont de Nemours & Co.		
ALVIN DEANS DUPREE	B.E. 1908	Jacksonville, Fla.
Special Agent, The Liverpool and London and Globe Insurance Co., Ltd. Care Lawrence Haynes & Son, P. O. Box 123		
RAYMOND ROWE EAGLE	B.E. 1908	New Bern, N. C.
Civil Engineer and Contractor		
MINNIC LUTHER EARGLE	B.Agr. 1908	Heath Springs, S. C.
Smith-Hughes Teacher of Agriculture, Heath Springs High School		
JOHN IVEY EASON	B.S. 1911	R. 1, Stantonsburg, N. C.
Carpenter		
WILLIAM HUNT EATON	B.S. 1909	Auburn, Ala.
Associate Professor of Dairying, Alabama Polytechnic Institute		
LATTA VANDERION EDWARDS	B.E. 1906	Winston-Salem, N. C.
C.E. 1911, Cornell University. Consulting Engineer		
CHARLES PATTERSON ELDRIDGE	B.E. 1915	Raleigh, N. C.
Secretary and Treasurer, Raleigh Engineering and Construction Co.		
SEBA ELDRIDGE	B.E. 1907	Rockford, Ill.
Professor of Sociology and Head of the Department of the Social Sciences, Rockford College		
TIMOTHY ELDRIDGE	B.E. 1904	Mount Olive, N. C.
WILLIAM KING ELDRIDGE	B.E. 1915	Pittsburgh, Pa.
Mechanical Draftsman, Koppers Company, Gas Engines		
THOMAS BENJAMIN ELLIOTT	B.S. 1918	Shelby, N. C.
Teacher of Agriculture, Shelby High School		
WILLIAM HENRY ELLIOTT	B.S. 1917	R. 6, Fayetteville, N. C.
Farmer		
THEOPHILUS THOMAS ELLIS	B.E. 1903	R. 4, Henderson, N. C.
Farmer		
WELDON THOMPSON ELLIS	B.E. 1906, M.E. 1908	Blacksburg, Va.
Professor of Power Engineering and Machine Design, Director of Department of Heat and Power, Virginia Polytechnic Institute		
LEE BORDEN ENNETT	B.S. 1895	Beaufort, N. C.
Superintendent of County Public Schools		
ALBERT EDWARD ESCOTT	B.E. 1906	Charlotte, N. C.
Editor and Manager of *Mill News*		
RANDAL BENNET ETHERIDGE	B.S. 1920	Wilmington, N. C.
Chemist, Swift & Co., Fertilizer Works		
WILLIAM CARLYLE ETHERIDGE	B.Agr. 1906	Columbia, Mo.
M.S. 1908. Ph.D. Cornell, 1915. Professor of Field Crops, University of Missouri		
EARLE MONTIER EVANS	B.E. 1913	Badin, N. C.
With Aluminum Company of America		
BENJAMIN BRYAN EVERETT	B.Agr. 1907	Palmyra, N. C.
M.S. 1912, University of Wisconsin. Farmer		
JAMES BECKETT EWART	B.S. 1909	Not located this year
RALPH RINGGOLD FAISON	B.S. 1909	Greensboro, N. C.
WILLIAM ALEXANDER FAISON	B.E. 1909	Chester, Pa.
President, Atlantic Steel Castings Co.		
ARCHIE ARRINGTON FARMER	B.E. 1914	Schofield Barracks, Hawaii
Captain Signal Corps, U. S. Army, Commanding 53d Telegraph Battalion		
ISAAC HERBERT FARMER	B.E. 1908	Virginia Beach, Va.
JAMES WILLIAM FARRIOR	B.E. 1904	Warsaw, N. C.
Physician		
JOHN ALEXANDER FARRIOR	B.S. 1916	Raleigh, N. C.
Farmer		
WILLIAM DOLLISON FAUCETTE	B.E. 1901	Norfolk, Va.
C.E. 1910. Chief Engineer, Seaboard Air Line Railroad		

Name	*Degree*	*Address*
ISAAC HENRY FAUST	B.E. 1895	Ramseur, N. C.
	Farmer	
JOHN BARTLETT FEARING, JR.	B.S. 1914	Windsor, N. C.
	Farmer and Merchant	
ALEXANDER LITTLEJOHN FEILD	M.S. 1914	Niagara Falls, Ont., Can.
	Research Physical Chemist, Union Carbide and Carbon Corporation, New York City	
RUTLEDGE HUGHES FEILD	B.S. 1915	Flora Dale, Pa.
	Assistant Sales Manager, Tyson Bros.	
BENJAMIN CAREY FENNELL	B.S. 1898	Milwaukee, Wis.
	M.E. 1900. With Nordberg Manufacturing Co.	
JAMES LUMSDEN FEREBEE	B.S. 1902	Milwaukee, Wis.
	Principal Assistant Engineer, Milwaukee Sewerage Commission	
PERCY BELL FEREBEE	B.E. 1913	Andrews, N. C.
	President and General Manager, Ferebee & Young Co.	
BENJAMIN TROY FERGUSON	B.Agr. 1908	Wilson, N. C.
	County Farm Demonstration Agent	
JOHN LINDSAY FERGUSON	B.E. 1907	Balboa Heights, C. Z.
	M. and E. Engineering, U. S. Government	
KARL MCATEE FETZER	B.E. 1914	New York, N. Y.
	Western Electric Co., Department 210K	
WALTER GOSS FINCH	B.E. 1905	Baltimore, Md.
	Junior Engineer, U. S. Engineering Department	
WILLIAM WALTER FINLEY	B.Agr. 1904	Charlottesville, Va.
	Proprietor, Win Wilkes Farm	
PAUL BRANDON FLEMING	B.E. 1918	Cleveland, Ohio
	With Phegley & Szekely, Consulting Engineers	
LANDON CABELL FLOURNOY	B.E. 1918	Selma, Ala.
	Electrical Engineer, Alabama Power Company	
DANIEL BURNIE FLOYD	B.E. 1913	Camp Knox, Ky.
	First Lieutenant, Field Artillery	
EDWARD YORK FLOYD	B.S. 1920	Hester, N. C.
	Farmer	
FRANK FULLER FLOYD	B.E. 1893	Knoxville, Tenn.
	Vice President and Sales Manager, Jellico Coal Mining Co.	
AARON CONARD FLUCK	B.E. 1915	Rancagua, Chili, S. A.
	Office Engineer, With The Braden Copper Company	
FRANK LINDSAY FOARD	B.S. 1909	R. 7, Salisbury, N. C.
	Farmer	
JAMES FONTAINE	B.E. 1914	Woodsdale, N. C.
MATTHEW MAURY FONTAINE	B.E. 1916	Woodsdale, N. C.
	Lumber Dealer	
RUFUS EUGENE FORBIS	B.E. 1910	Charlotte, N. C.
	M.E. 1913. Mechanical Engineer, Chemical Construction Co.	
ARTHUR CRAWFORD FOSTER	B.S. 1917	Madison, Wis.
	M.S. 1920, University of Wisconsin. Research Assistant, Department of Plant Pathology, University of Wisconsin	
SHIRLEY WATSON FOSTER	B.Agr. 1906	San Francisco, Calif.
	Entomologist and Manager Insecticide Department, General Chemical Co.	
WILLIAM BENJAMIN FOSTER	B.E. 1915	Raleigh, N. C.
	With H. E. Satterfield, Engineer-Builder	
GEORGE WASHINGTON FOUSHEE	B.E. 1904	Greensboro, N. C.
	Secretary and Treasurer, Dicks Laundry Co.	
ELIAS VAN BUREN FOWLER	B.E. 1907	R. 1, Horseshoe, N. C.
	Farmer	
ROSCOE LOOMIS FOX	B.E. 1909	Charlotte, N. C.
	In Charge of Office, Pound & Moore	
JAMES ROSCOE FRANCK	B.S. 1914	Richlands, N. C.
	Farmer	

Name	*Degree*	*Address*
GEORGE STRONACH FRAPS	B.S. 1896	College Station, Texas
Ph.D., Johns Hopkins University. State Chemist of Texas. Chemist, Texas Experiment Station. Chemist, Texas Feed Control		
DANIEL ROBERT STEELE FRAZIER	B.E. 1918	Monroe, N. C.
With State Highway Commission		
JOHN ALEXANDER FRAZIER	B.E. 1916	Kings Creek, N. C.
Farmer		
ELMO VERNON FREEMAN	B.E. 1911	Middleboro, Ky.
Salesman, Westinghouse Electric and Manufacturing Co.		
EDWIN WOOD FULLER	B.E. 1919	Raeford, N. C.
PERCY LEIGH GAINEY	B.Agr. 1908	Manhattan, Kans.
M.S. 1910. Associate Professor Bacteriology, Kansas State Agricultural College		
EDGAR WILLIAM GAITHER	B.S. 1904	Goldsboro, N. C.
District Farm Demonstration Agent, Eastern District		
JAMES JERVEY GANTT	B.E. 1910	St. Augustine, Fla.
Box 971		
FREDERICK CARLTON GARDNER	B.E. 1917	Lansford, Pa.
Assistant Resident Engineer, Phœnix Utility Co. Care Old Company Club		
JUNIUS TALMADGE GARDNER	B.E. 1908	Shelby, N. C.
With U. S. Postoffice, Shelby, N. C.		
OLIVER MAX GARDNER	B.S. 1903	Shelby, N. C.
Lawyer		
ZEBULON CLIFTON GARDNER	B.S. 1916	Washington, D. C.
Government Employee		
CLEMENT LEINSTER GARNER	B.E. 1907	Washington, D. C.
Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey		
EARLY BAXTER GARRETT	B.S. 1918	Troy, N. C.
County Agricultural Demonstration Agent		
LEWIS PRICE GATTIS	B.E. 1909	Greenville, S. C.
Manager, Carolina Portland Cement Company		
JOHN GEO. HARVEY GEITNER, JR.	B.E. 1914	Hickory, N. C.
With A. A. Shuford Cotton Mills		
EDWARD MOORE GIBBON	B.E. 1893	South Jacksonville, Fla.
City Engineer		
NICHOLAS LOUIS GIBBON	B.S. 1897	Washington, D. C.
Special Agent, Division of Manufactures, Department of Commerce		
SETH MANN GIBBS	B.E. 1908	Savannah, Ga.
Resident Engineer, Seaboard Air Line Railway		
THOMAS FENNER GIBSON	B.E. 1912	Philadelphia, Pa.
District Manager, Western Waterproofing Co., Engineers and Contractors		
LAMAR CARSON GIDNEY	B.E. 1903	Shelby, N. C.
Engineering Department, Southeastern Underwriters Association		
RICHARD F. GIERSCH, JR.	B.E. 1912	Maryville, Tenn.
Electrical Superintendent, Aluminum Co. of America, Sheet Mill		
LOVIC RODGERS GILBERT	B.E. 1907	Raleigh, N. C.
T.E. 1915. Superintendent, Caraleigh Mills Co.		
PETER MELVIN GILCHRIST	B.S. 1915	Laurinburg, N. C.
Farmer		
RALPH ALLISON GILL	B.E. 1914	El Paso, Tex.
Assistant to Superintendent of El Paso Electric Railway Co.		
GEORGE WILLIAM GILLETTE	B.E. 1911	Camp Jackson, S. C.
Captain, Corps of Engineers, U. S. Army		
MAURICE MORDECAI GLASSER	B.E. 1908	Not located this year
BENJAMIN DUKE GLENN	B.E. 1918	Philadelphia, Pa.
Representative, Erwin Yarn Agency, Inc.		
CHARLES WILLIS GOLD	B.S. 1895	Greensboro, N. C.
Treasurer, Jefferson Standard Life Insurance Co.		

Name	*Degree*	*Address*
MOSES HENRY GOLD	B.E. 1908	Columbus, Ga.
Trainmaster, Seaboard Air Line Railway		
ROY DURANT GOODMAN	B.S. 1913	R. 2, Concord, N. C.
County Farm Demonstration Agent		
AMZI NEALY GOODSON	B.E. 1916	Salisbury, N. C.
Signal and Electrical Department, Southern Railway		
HOWARD HENLEY GORDON	B.S. 1919	Chula, Va.
Manager, Glenmore Stock Farm		
CICERO FRED GORE	B.E. 1913	Weldon, N. C.
Superintendent and Engineer of Highways, Halifax County		
ALBERT SIDNEY GOSS	B.E. 1909	Albany, Ga.
Engineer, Georgia-Alabama Power Co.		
JOHN DAVID GRADY	B.Agr. 1908	Great Falls, S. C.
Farmer and Trader		
ROBERT WALTER GRAEBER	B.S. 1911	Statesville, N. C.
County Agricultural Demonstration Agent		
WILLIAM HAYWOOD GRAHAM, JR.	B.E. 1912	Atlanta, Ga.
Facilities Supervisor, Southern Bell Telephone and Telegraph Co.		
ROBERT STRICKLER GRAVES	B.E. 1907	Chagrin Falls, Ohio
President and General Manager, Chagrin Valley Electric Co.		
CHARLIE POOL GRAY	B.E. 1909	Buxton, N. C.
Merchant		
FRANK TEMPLE GRAY	B.E. 1915	Charlotte, N. C.
Junior Engineer, Southern Bell Telephone and Telegraph Co.		
GEORGE PENDER GRAY	B.S. 1893	Not located this year
JAMES MILLER GRAY	B.S. 1910	Asheville, N. C.
District Farm Demonstration Agent		
STERLING GRAYDON	B.E. 1905	Charlotte, N. C.
Secretary, High Shoals Company		
ANDREW HARTSFIELD GREENE, JR.	B.S. 1909	Raleigh, N. C.
With Department of Internal Revenue		
MARION JACKSON GREENE	B.S. 1896	Charlotte, N. C.
Teacher of Manual Training, Charlotte High School		
GEORGE MAXWELL GREENFIELD	B.S. 1920	Charleston, S. C.
Assistant Stillman, Standard Oil Company		
KENNETH LEE GREENFIELD	B.S. 1916	Whitmell, Va.
Agricultural Instructor, Whitmell Farm-life School		
ARTHUR WYNNS GREGORY	B.S. 1906	Halifax, N. C.
Farmer and Merchant		
JOHN LEROY GREGSON, JR.	B.E. 1917	Charlotte, N. C.
Engineer, State Highway Commission		
PAUL STIREWALT GRIERSON	B.E. 1904	New York, N. Y.
Chief Engineer, Charles Cory & Son, Inc.		
WILLIAM HENRY GRIFFIN	B.E. 1914	Goldsboro, N. C.
Member of firm, W. H. Griffin & Son, Coal and Wood Dealers		
JOSEPH PERRIN GULLEY, JR.	B.E. 1904	Norfolk, Va.
Traveling Salesman, Woodhouse Electric Co.		
RICHARD NESTUS GURLEY	B.E. 1920	Shelby, N. C.
WINSTON PAYNE GWATHMEY	B.E. 1913	Richmond, Va.
Assistant Engineer, C. and O. Railway		
JAMES HOLMES HADDOCK	B.E. 1915	Durham, N. C.
Efficiency Department, Erwin Cotton Mills Co.		
DORSEY YATES HAGAN	B.E. 1908	Greensboro, N. C.
Real Estate		
FRANK JOSHUA HAIGHT	B.E. 1917	Florence, S. C.
With Palmetto Power and Light Co.		
FELIX STANTON HALES	B.E. 1913	Cleveland, Ohio
C.E., Cornell University, 1916. Assistant Engineer, N. Y. C. and St. L. Ry.		

Name	*Degree*	*Address*
CHARLES GANZER HALL	B.E. 1913	Providence, R. I.
General Superintendent, Taunton Manufacturing Co.		
DENNIS HENRY HALL, JR.	B.S. 1919	Raleigh, N. C.
Instructor in Poultry Science, N. C. State College		
JOHN GREENE HALL, JR.	B.E. 1920	Chillicothe, Ohio
Assistant in Engineering Corps, Baltimore and Ohio Railroad		
JOHN HUBBARD HALL, JR.	B.S. 1915	Durham, N. C.
Law Student, Trinity College		
HORACE LESTER HAMILTON	B.E. 1906	Philadelphia, Pa.
With N. W. Ayer & Son, Advertising Agents		
ROBERT WILLIAMS HAMILTON, JR.	B.S. 1916	Pacolet, S. C.
Farmer		
WILLIAM ROY HAMPTON	B.S. 1909	Plymouth, N. C.
Owner, firm of W. H. Hampton & Son, Inc., Merchants and Bankers.		
THOMAS WHEELER HANCOCK, JR.	B.S. 1920	R. 1, Jacksonville, N. C.
Farmer		
LEROY CORBETT HAND	B.E. 1913	Chadbourn, N. C.
Merchant		
JOHN ISAAC HANDLEY	B.S. 1904	Atlanta, Ga.
M.S. 1916. President and General Manager, Southeastern Laboratories, Inc.		
JOHN FREDERICK HANSELMAN	B.E. 1906	Emporia, Va.
PHILIP WILLIAM HARDIE	B.E. 1907	Camp Eustis, Va.
Captain, Coast Artillery Corps, U. S. Army Headquarters, 30th Artillery Brigade		
JARVIS BENJAMIN HARDING	B.E. 1904	Greenville, N. C.
C.E. 1909. Engineer, Pitt County Highway Commission		
ROBERT MCKENZIE HARDISON	B.E. 1912	Boston, Mass.
B.Arch., Columbia University, 1915. District Engineer, Corrugated Bar Co.		
NATHAN DAVID HARGROVE	B.S. 1912	Richmond, Va.
With The Imperial Tobacco Co., Ltd.		
RICHARD HUGH HARPER	B.S. 1905	Charlotte, N. C.
With Alexander & Garsed		
GEORGE ROLAND HARRELL	B.S. 1900	Grasselli, N. J.
With Grasselli Chemical Co., as Division Head in Manufacturing Department		
JOHN WILLIAM HARRELSON	B.E. 1909	Raleigh, N. C.
M.E. 1915. Associate Professor of Mathematics, N. C. State College		
ADAM HUGH HARRIS	B.S. 1920	Carthage, N. C.
Tractor Demonstrator and Salesman, Jennings Motor Co.		
CARL RUSH HARRIS	B.E. 1917	Lancaster, S. C.
With Lancaster Cotton Mills		
CEBERN DODD HARRIS	B.S. 1897	Anchorage, Ky.
C. D. Harris & Co.		
GORDON HARRIS	B.E. 1909	New York City
E.E. 1914. Electrical Engineer, Murrie & Co., Engineers		
JOHN FLEMING HARRIS	B.E. 1917	Charlotte, N. C.
Power Engineer, H. and P. P. Department, With Grinnell Co., Inc.		
RUSSELL PEYTON HARRIS	B.S. 1915	Raleigh, N. C.
Student in Vocational Agriculture, N. C. State College		
THOMAS DEVIN HARRIS	B.E. 1911	Albemarle, N. C.
Highway Engineer		
WILLIAM HENRY HARRISS	B.E. 1895	New York, N. Y.
M.E. 1896. Vice President, Liberty Textile Corporation		
ABRAM EDGAR HARSHAW	B.E. 1918	Newport News, Va.
With Newport News Shipbuilding and Dry Dock Co.		
HENRY MERCER HARSHAW	B.E. 1915	Atlanta, Ga.
President, South Atlantic Auto Sales Co.		
THOMAS ROY HART	B.E. 1913	Raleigh, N. C.
T.E. 1920. Instructor in Textile Engineering, N. C. State College		
ADOLPH THEODORE HARTMANN	B.E. 1917	Charlotte, N. C.

Name	*Degree*	*Address*

FRED BRYAN HARTON....B.S. 1920....Hendersonville, N. C.
Teacher of Vocational Agriculture

HARRY HARTSELL....B.E. 1912....Raleigh, N. C.
Professor of Physical Education, N. C. State College

JOHN HARVEY, JR....B.E. 1914....West Philadelphia, Pa.
M.D. University Hospital, Philadelphia, Pa.

JAMES SHOFFNER HATHCOCK....B.S. 1919....R. 2, Wilson, N. C.
Teacher of Science, Rock Ridge High School

JOHN RUBY HAUSER....B.E. 1918....Louisville, Ky.
Industrial Sales Department, Westinghouse Electric and Manufacturing Co.

FRANK HAWKS....B.E. 1910....Newport News, Va.
Draftsman, Piping Division, Newport News Shipbuilding and Dry Dock Co.

CLAUDE JACQUES HAYDEN....M.S. 1916....Clemson College, S. C.
Associate Professor Horticulture, Clemson Agricultural College

HENRY WADSWORTH HAYWARD....B.E. 1917....Toledo, Ohio
Engineer, Toledo Power and Light Co.

EDMUND BURKE HAYWOOD....B.E. 1910....Raleigh, N. C.
Civil Engineer

WILLIAM STEPHEN HAYWOOD....B.E. 1916....Newport News, Va.
With Engine Estimating Division, Newport News Shipbuilding and Dry Dock Co.

JOKTAN LAFAYETTE HEMPHILL....B.E. 1907....Hoboken, N. J.
President, J. L. Hemphill & Co., Inc.

HARRY BENJAMIN HENDERLITE....B.E. 1915....Raleigh, N. C.
Testing Engineer, N. C. State Highway Commission

LEONARD HENDERSON....B.E. 1909....Salisbury, N. C.
Resident Engineer, State Highway Commission

MAURICE HENDRICK....B.E. 1908....Cliffside, N. C.
General Superintendent, Cliffside and Haynes Mills

JOHN WADE HENDRICKS....B.S. 1917....Newton, N. C.
County Agricultural Demonstration Agent

JESSE MEACHEM HENLEY....B.S. 1920....Raleigh, N. C.
Extension Agent, Division of Markets, State Department of Agriculture

LEONARD ORR HENRY....B.E. 1916....Charlotte, N. C.
Junior Engineer, Southern Bell Telephone and Telegraph Co.

HARRY LEE HERMAN....B.S. 1920....Conover, N. C.
Farmer

VERNON RAY HERMAN....B.S. 1915....Tarboro, N. C.
M.S. 1920. Plant Breeder and General Manager, "Edgecombe Seed Breeders' Association"

LAWRENCE JAMES HERRING....B.Agr. 1907....Wilson, N. C.
D.V.S., Kansas City Veterinary College. Veterinarian

JERE ISAAC HERRITAGE....B.E. 1905....Jacksonville, N. C.
Civil Engineer, John L. Roper Lumber Co., and Superintendent of Construction of Drainage District No. 5, Washington County, N. C.

EDGAR ALLEN HESTER....B.E. 1916....Brooklyn, N. Y.
Assistant Electrical Engineer, Brooklyn Edison Co., Inc.

THOMAS JASPER HEWETT....B.E. 1913....Wilmington, N. C.
Junior Engineer, U. S. Engineer Office

CLARENCE WILSON HEWLETT....B.E. 1906....Iowa City, Iowa
With Physics Department, State University of Iowa

JOHN GRAY HICKS....B.S. 1919....Wilmington, N. C.
Real Estate Business

RUFUS WILLIAM HICKS, JR....B.E. 1910....Wilmington, N. C.
M.E. 1915. Managing Director, Sanitary Equipment Construction Co.

BASCOMBE BRITT HIGGINS....B.S. 1909....Experiment, Ga.
M.S. 1910; Ph.D. 1913. Botanist, Georgia Agricultural Experiment Station

LYDA ALEXANDER HIGGINS....B.S. 1910....Starkville, Miss.
Dairy Husbandman, Extension Department, Mississippi Agricultural College

RILEY WEAVER HIGGINS....B.S. 1913....R. 4, Asheville, N. C.
Farm and Dairy Manager for J. M. Shook

Name	*Degree*	*Address*
JAMES ALLAN HIGGS, JR.	B.E. 1906	Atlanta, Ga.
C.E. 1910. Resident Manager, Southeastern District, Massey Concrete Products Corporation, 1009 Candler Building		
JERE EUSTIS HIGHSMITH	B.S. 1897	Parkersburg, N. C.
Farmer		
DANIEL HARVEY HILL, JR.	B.S. 1909	Charlotte, N. C.
Treasurer, Hill, Clark & Co., Stocks and Bonds, Editor, *Highways and Industries*		
DAVID RAYMOND HINKLE	B.E. 1911	Cedartown, Ga.
Superintendent, Cedartown Cotton and Export Co.		
GUY FRANCIS HINSHAW	B.E. 1907	Winston-Salem, N. C.
C.E. 1915. Hinshaw & Ziglar, Civil Engineers		
EDWARD GIBBON HOBBS	B.S. 1920	Rocky Mount, N. C.
Teacher of Agriculture, Nash County		
BRUCE DUNSTON HODGES	B.E. 1917	Kinston, N. C.
With Gilbert C. White, Consulting Engineer		
GEORGE HERBERT HODGES	B.E. 1904	Uniontown, Pa.
Superintendent of Continental No. 2 Mine, H. C. Frick Coke Co.		
RALPH HINTON HODGES	B.S. 1916	Washington, N. C.
With Thompson & Hodges, Seed and Feed, Wholesale and Retail		
WILBUR BREEDEN HODGES	B.S. 1920	Not located this year
EDGAR ALLAN HODSON	M.S. 1914	Little Rock, Ark.
B.S., Alabama Polytechnic Institute, 1911. Agent in Cotton Marketing Demonstrations, Agr. Extension Division, University of Arkansas		
LABAN MILES HOFFMAN, JR.	B.E. 1905	Dallas, N. C.
Cashier, Bank of Dallas		
WILLIS ASKEW HOLDING	B.S. 1912	Raleigh, N. C.
Member of firm, King & Holding, Men's Clothing		
CHARLES BOLLING HOLLADAY	B.E. 1893	Wilmington, Del.
Retired		
EDISON PARKER HOLMES	B.E. 1917	Greensboro, N. C.
Agent, Philadelphia Storage Battery Co.		
THOMAS HALL HOLMES, JR.	B.E. 1916	Goldsboro, N. C.
Manager, Wayne Red Brick Co.		
RAY AUGUSTUS HOLSHOUSER	B.E. 1920	Concord, N. C.
With Cabarrus Mill, Kannapolis, N. C.		
DEAN RONEY HOLT	B.E. 1916	Milwaukee, Wis.
Hydraulic Department, Allis-Chalmers Manufacturing Co.		
PETER ARMSTRONG HOLT	B.S. 1913	Graham, N. C.
Office Clerk, L. Banks Holt Manufacturing Co.		
WILLIAM NORMAN HOLT	B.E. 1907	Smithfield, N. C.
Member of firm of Holt Oil Co.		
EDWARD HOLLAND HOLTON	B.S. 1917	Winston-Salem, N. C.
With R. J. Reynolds Tobacco Co.		
SOLOMON LINN HOMEWOOD	B.S. 1920	Hamlet, N. C.
Development Agent, Seaboard Air Line Railway Co.		
BENJAMIN OLIVER HOOD	B.E. 1901	Port Newark, N. J.
C.E. 1919. Designer, Submarine Boat Corporation		
HARRY ELEY HOOD	B.E. 1920	Schoolfield, Va.
Industrial Chemist, Riverside and Dan River Cotton Mills		
LOUIE LEE HOOD	B.E. 1910	Asheville, N. C.
Hood Music Company		
DAVID LEE HOOPER	B.E. 1915	Fort McIntosh, Texas
Captain, 17th Infantry, Motor Transport Officer		
ROBERT MULLEN HOOPER	B.E. 1917	Charlotte, N. C.
With Engineering Department, Southern Bell Telephone and Telegraph Co.		
WILLIAM RANSOM HOOTS	B.S. 1917	East Flat Rock, N. C.
Carolina Nursery Co.		
HERNDON HOPKINS	B.S. 1915	Not located this year

Name	*Degree*	*Address*

WALTER CLEARY HOPKINS....B.E. 1913....Baltimore, Md.
Engineer of Bridges, Maryland State Roads Commission

WAYNE ARRINGTON HORNADAY....B.S. 1909....Greensboro, N. C.
M.S. 1910. D.V.M., Kansas City Veterinary College. Veterinarian. City Milk and Meat Inspector

FRANK WILLIAM HOWARD....B.E. 1917....Bridgeport, Conn.
With Connecticut State Highway Department, New Milford Division

JESSE MCRAE HOWARD....B.E. 1904....Charlotte, N. C.
Technical Demonstrator, Dyestuffs Sales Department, Charlotte Office, E. I. DuPont de Nemours Co.

JOHN HOWARD....B.S. 1896....Middlesboro, Ky.
Attorney at Law

JOHN STEWART HOWARD....B.S. 1915....Salemburg, N. C.
Teacher of Agriculture, Salemburg High School

PAUL NOBLE HOWARD....B.E. 1916....Charlotte, N. C.
Vice President, Blythe Bros. Co., Engineers and Contractors

SAMUEL BENJAMIN HOWARD....B.E. 1913....Lenoir, N. C.
County Engineer, Caldwell County Road Commission

RALPH WILKINSON HOWELL....B.S. 1912....Terra Ceia, N. C.
Manager, The Nissen Farms

JESSE FRANCIS HUETTE....B.E. 1914....Newport News, Va.
Newport News Shipbuilding and Dry Dock Co.

BRANTON FAISON HUGGINS....B.E. 1904....Griffin, Ga.
Contractor and Engineer

HENRY ALLEN HUGGINS....B.S. 1900....Wilmington, N. C.
Member of firm of Geo. W. Huggins Co., Jewelers

CHRISTOPHER MILLER HUGHES....B.E. 1895....Richmond, Va.
B.S. 1899. Wholesale Lumber Dealer

WILLIAM FRANK HUMBERT, JR....B.E. 1920....Spray, N. C.
Assistant to Resident Engineer, The Carolina Cotton and Woolen Mills Co.

ARTHUR LEE HUMPHREY....B.E. 1919....Wilmington, N. C.
With Engineering Department, Tidewater Power Co.

LLOYD RAINEY HUNT....B.E. 1905....Lexington, N. C.
With Electrical Engineering Department, Dacotah Cotton Mills and Nokomis Cotton Mills

HILL MCIVER HUNTER....B.E. 1904....Greensboro, N. C.
General Purchasing Agent, Revolution Mills, Asheville Mills, Minneola Mills, Cliffside Mills, White Oak Mills, Proximity Print Works, Proximity Mills, Haynes Mills, Salisbury Cotton Mills, Eno Cotton Mills, Dacotah Cotton Mills

JOHN BLAKE HUNTER....B.E. 1920....Atlanta, Ga.
Student Engineer, American Telephone and Telegraph Company

MALCOLM BEALL HUNTER....B.E. 1895....Charlotte, N. C.
President, Acme Plumbing and Heating Co.

WILLIAM TISDALE HURTT....B.E. 1914....Atlanta, Ga.
Mechanical Engineer, Earl F. Scott & Co., Inc.

CHRISTOPHER THOMAS HUTCHINS....B.E. 1920....North Charlotte, N. C.
Draughtsman, Grinnell Company, Inc.

JOHN ELI IVEY....B.S. 1917....Raleigh, N. C.
Assistant Poultry Investigator and Pathologist, N. C. Experiment Station

JOHN WILLIAM IVEY....B.E. 1909....Seven Springs, N. C.
Farmer

JOHN JACOB JACKSON....B.E. 1918....R. 4, Kinston, N. C.
Farmer

SHOBER KORNER JACKSON....B.S. 1918....Raleigh, N. C.
With N. C. Agricultural Experiment Station

WILLIAM COLBERT JACKSON....B.S. 1896....Wake Forest, N. C.
Farmer

MURRAY GIBSON JAMES....B.S. 1918....Gainesville, Ga.
Teacher, Riverside Military Academy

SIDNEY EARL JENNETTE....B.E. 1916....Lake Landing, N. C.

Name	*Degree*	*Address*
GEORGE LINWOOD JEFFERS	B.E. 1915	Gloversville, N. Y.
Commercial Agent, Fulton County Gas and Electric Co.		
ERNEST JUDSON JEFFRESS	B.E. 1913	Goldsboro, N. C.
Manager, Goldsboro Ice Co.		
DOUGLAS CREELMAN JEFFREY	B.E. 1913	Williamsville, N. Y.
Automobile Dealer		
JOHN LEBON JENKINS	B.E. 1916	Detroit, Mich.
With Crucible Steel Company of America		
EUGENE CARL JERNIGAN	B.S. 1920	Benson, N. C.
Teacher of Vocational Education		
FRED DUNCAN JEROME	B.E. 1919	Raleigh, N. C.
Resident Engineer, N. C. State Highway Commission		
WILLIAM LEON JEWELL	B.E. 1914	Sanford, N. C.
Civil Engineer, Joe W. Stout & Co.		
LACY JOHN	B.S. 1914	Lumber Bridge, N. C.
Farmer		
EUGENE COLISTUS JOHNSON	B.E. 1903	Ingold, N. C.
Lumberman and Farmer		
JAMES WRIGHT JOHNSON	B.E. 1913	Seymour, Conn.
Electrical Engineer, Kerite Insulated Wire and Cable Co.		
LEANDER BROWNLOW JOHNSON	B.S. 1916	R. 5, Hendersonville, N. C.
PAUL WORTHY JOHNSON	B.S. 1917	Raeford, N. C.
General Manager, Johnson Lumber Co.		
WILLIAM FLADGER R. JOHNSON	B.E. 1909	Marion, S. C.
Retail Furniture and Real Estate		
WALTER MYATT JOHNSON	B.E. 1917	Chalybeate Springs, N. C.
VICTOR ALLISON JOHNSTON	B.S. 1916	Mooresville, N. C.
M.S. 1917. With Cooperative Creamery Co.		
WILLIAM DANIEL JOHNSTON	B.E. 1919	Cincinnati, Ohio
Flow Meter Specialist, General Electric Co.		
WILLIS NEAL JOHNSTON	B.E. 1914	Mooresville, N. C.
Hardware and Automobile Dealer		
ALBERT CARL JONES	B.Agr. 1907	High Point, N. C.
D.V.S., Kansas City Veterinary College. Veterinarian, Meat and Milk Inspector		
FREDERICK JOHN JONES	B.E. 1909	Richmond, Va.
Assistant Engineer, Valuation Committee, Chesapeake and Ohio Railway		
GARLAND JONES	B.S. 1900	Raleigh, N. C.
OMRA BURR JONES	B.S. 1920	China Grove, N. C.
Superintendent, Rowan County Farm-life School		
ROBERT FRANK JONES	B.E. 1910	Not located this year
WILLIAM COOKE JONES	B.E. 1918	Newport News, Va.
With Newport News Shipbuilding and Dry Dock Co.		
WILLIAM MANLEY JONES	B.E. 1914	New Kensington, Pa.
Power Engineer, U. S. Aluminum Co.		
WILLIAM WHITMORE JONES	B.E. 1907	Oak Park, Ill.
Electrician, Western Electric Co.		
CLYDE RAYMOND JORDAN	B.E. 1910	Elizabethtown, N. C.
Vice President, Bladen Auto Co.		
HARVEY LANGHILL JOSLYN	B.S. 1913	Vanceboro, N. C.
M.S. 1916. Superintendent, Craven County Farm-life School		
SIR KEITH KELLER	B.E. 1914	St. Louis, Mo.
Engineer of Construction, Missouri, Kansas and Texas Lines		
JOHN GORDON KELLOGG	B.S. 1912	Laguna, P. I.
With Quartermaster Department, U. S. Army, Philippine Islands		
MARTIN KELLOGG	B.Agr. 1901	Sunbury, N. C.
Farmer		
REX LIVINGSTON KELLY	B.E 1916	Sanford, N. C.
CLYDE BENNETT KENDALL	B.S. 1897	Santo Domingo City, R. D.
Topographic Engineer, U. S. Geological Survey, Assistant Jefe de Agrimensores, Dominican Republic		

Name	*Degree*	*Address*

ALPHEUS ROUNTREE KENNEDY.....B.S. 1898.....Bethlehem, Pa.
Chief Draftsman, Hull Engineering Division, Bethlehem Shipbuilding
Postmaster

JAMES MATTHEW KENNEDY.....B.E. 1903.....Raleigh, N. C.
Architect

SYDNEY GUSTAVUS KENNEDY.....B.S. 1897.....Lakeland, Fla.
General Foreman, Atlantic Coast Line Railroad

WOODFORD ARMSTRONG KENNEDY.....B.E. 1916.....Charlotte, N. C.
Southern Representative, Electro Bleaching Gas Co.

WILLIAM PENDLETON KENNEDY.....B.E. 1916.....Warsaw, N. C.
Superintendent of Warsaw Water and Power Plant

WILLIAM KERR .....B.S. 1904.....Boise, Idaho
M.S. 1912, V. P. I. Swine Specialist, Extension Division

GEORGE EDISON KIDD.....B.E. 1913.....Hampton, Va.
With N. N. and H. Railway, G. & E. Co.

WAVERLY FLETCHER KILPATRICK.....B.S. 1915.....Asheville, N. C.
Cashier, American Railway Express Co.

PAUL HANNER KIME.....B.S. 1916.....Raleigh, N. C.
Plant Breeder, N. C. Experiment Station

PAUL KING .....B.E. 1914.....Richmond, Va.
C.E. 1916, Cornell University. Engineer, with Virginia State Highway
Commission

CARL JAMES KIRBY.....B.S. 1917.....Not located this year

LUTHER HILL KIRBY.....B.E. 1910.....Not located this year

SAM JONES KIRBY.....B.S. 1912.....Smithfield, N. C.
Farm Demonstration Agent, Johnston County

WILLIAM FRANKLIN KIRKPATRICK.....B.E. 1904.....Storrs, Conn.
B.Agr. 1905. Professor of Poultry Husbandry, Connecticut
Agricultural College

LYMAN KISER .....B.S. 1918.....Lincolnton, N. C.
Plant Manager, Lincolnton Creamery and Ice Cream Co.

JOSEPH LAWRENCE KNIGHT.....B.S. 1897.....Stocktonia, Fla.

LOUIS BRASWELL KNIGHT.....B.S. 1913.....Camp Lee, Va.
First Lieutenant Infantry, U. S. Army

ROBERT VERNON KNIGHT.....B.S. 1915.....Tarboro, N. C.
Farmer

STARR NEELY KNOX.....B.E. 1905.....Charlotte, N. C.
Assistant Engineer, Southern Railway

WILLIAM GRAHAM KNOX.....B.S 1906.....New York, N. Y.
Electro-Chemist, Research and Development Laboratory, Chemical Branch,
Western Electric Co.

LAFAYETTE FRANCK KOONCE.....B.Agr. 1907.....Raleigh, N. C.
D.V.M. 1909, Kansas City Veterinary College. Veterinary Surgeon

FRANK KIPP KRAMER.....B.E. 1915.....Elizabeth City, N. C.
With Kramer Bros. Co., Lumber Manufacturers and Dealers

HERBERT WILLIAM KUEFFNER.....B.E. 1908.....Durham, N. C.
City Engineer

FREDERICK CREECY LAMB.....B.S. 1898.....El Paso, Texas
Chemist, City Health Office

CLAUDE MILTON LAMBE.....B.E. 1908.....Raleigh, N. C.
Civil Engineer

CARL JOSHUA LAMBETH.....B.E. 1912.....Tsinan, China
Traveling Salesman, Anderson-Meyers Co., Ltd.

BENNETT LAND, JR.....B.E. 1903.....Apopka, Fla.
Secretary and Treasurer, Consumers Lumber and Veneer Co.

JOHN THOMAS LAND.....B.E. 1903.....Not located this year

JAMES THOMAS LARKINS.....B.E. 1919.....State College, Pa.
Instructor, Pennsylvania State College

MARK CLINTON LASITTER.....B.E. 1910.....Snow Hill, N. C.
Civil Engineer

Name	*Degree*	*Address*
FRANK LEE LASSITER	B.E. 1920	Spartanburg, S. C.
With J. B. Caldwell & Co.		
HARRY VANN LATHAM	B.S. 1919	Belhaven, N. C.
Farmer		
JAMES EDWARD LATHAM	B.S. 1909	Parmele, N. C.
Merchant		
CHARLES EDWARD LATTA	B.E. 1908	Raleigh, N. C.
DOUGLAS ALLEN LEARD	B.E. 1914	Norfolk, Va.
Right of Way Engineer, Seaboard Air Line Railway		
CURTIS WILLIAMS LEE	B.E. 1912	Monroe, N. C.
Superintendent, Water and Light Plant		
EUGENE TALMAGE LEE	B.E. 1910	Dunn, N. C.
JOSEPH LEE, JR.	B.S. 1917	Landrum, S. C.
Farmer and Nurseryman, With W. R. Hoots		
WILLIAM DANIEL LEE	B.S. 1918	Asheville, N. C.
With N. C. Department of Agriculture, Soil Survey		
WILLIAM EDWARD LEEPER	B.E. 1918	Gastonia, N. C.
Civil Engineer		
JOSEPH RAOUL LEGUENEC	B.E. 1915	Mt. Pleasant, Tex.
Instrumentman, St. Louis Southwestern Railway Co.		
SAMUEL GEORGE LEHMAN	M.S. 1917	Raleigh, N. C.
Assistant Pathologist, N. C. Agricultural Experiment Station		
CHARLES RILEY LEONARD	B.S. 1918	Reynolda, N. C.
Poultryman, Reynolda Farm, Inc.		
JAMES GILMORE LEONARD	B.E. 1919	Schenectady, N. Y.
With General Electric Co.		
ELBERT FRANCIS LEWIS	B.E. 1918	Seattle, Wash.
Junior Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey		
IRVIN TRACEY LEWIS	B.S. 1915	Charlotte, N. C.
D.V.M. 1917. Veterinarian		
ROBERT LINGLE LEWIS	B.E. 1918	Gastonia, N. C.
Member of firm, Leeper & Lewis, Civil Engineers		
WILLIAM DIXON LEWIS	B.S. 1914	Rockingham, N. C.
Manager of J. F. Diggs' Farm		
MORRIS LIFEROCK	B.E. 1913	Washington, D. C.
C.E. 1917. Assistant, American Ephemeris, U. S. Naval Observatory. Member Washington Society of Engineers		
JESSE JULIAN LILES	B.E. 1901	Baltimore, Md.
With Power and Mining Department, General Electric Co.		
HENRY ALBERT LILLY	B.S. 1917	Badin, N. C.
Bacteriologist, Tallassee Power Co.		
HENRY MARVIN LILLY	B.E. 1905	Norfolk, Va.
U. S. Junior Engineer, Customhouse		
ERNEST ERWIN LINCOLN	B.E. 1904	Newark, N. J.
With Submarine Boat Corporation		
JESSE WEBB LINDLEY	B.S. 1915	Brevard, N. C.
County Agricultural Demonstration Agent		
DAVID LINDSAY	B.E. 1908	Fieldale, Va.
Superintendent, Fieldale Mills		
ROBERT OPIE LINDSAY	B.E. 1916	Bedford City, Va.
Designer and Contractor, With John M. Lindsay		
JOHN HENRY LITTLE	B.E. 1908	Charlotte, N. C.
Sales Engineer, General Electric Co.		
WILLIAM BENNETT LITTLE	B.S. 1914	Wadesboro, N. C.
Farmer		
MARION LAMAR LIVERMON	B.E. 1914	Portsmouth, Va.
ULPHIAN CARR LOFTIN	B.S. 1910	Tlahualilo, Dgo. Mex.
With Compania del Tlahualilo		
FORREST BAINIE LONG	B.E. 1919	Greenville, S. C.
With Union Finishing and Bleaching Co.		

Name	*Degree*	*Address*
PAUL THOMAS LONG	B.S. 1919	Raleigh, N. C.
Instructor in Animal Husbandry, N. C. State College		
RALPH LONG	B.S. 1909	Greensboro, N. C.
Proprietor, Vice President and Sales Manager, Penny & Long		
LOUIS EDGAR LOUGEE	B.S. 1907	Not located this year
LOUIS OMER LOUGEE	B.E. 1901	Huntington, W. Va.
Chief Engineer, Island Creek Coal Co. and Pond Creek Coal Co.		
THOMAS PINKNEY LOVELACE	B.E. 1912	Lincolnton, Ga.
Lumberman		
GEORGE LAFAYETTE LYERLY	B.E. 1908	Hickory, N. C.
Hardware Dealer		
LIPSCOMBE GOODWIN LYKES	B.E. 1905	Havana, Cuba
Vice President, Lykes Brothers, Inc.		
THOMPSON MAYO LYKES	B.E. 1906	Tampa, Fla.
Vice President, Lykes Brothers, Inc.		
GEORGE GREEN LYNCH	B.E. 1905	Wilmington, N. C.
Chief Draftsman, Atlantic Coast Line Railway Co.		
ALBERT SYDNEY LYON	B.S. 1899	Rocky Mount, N. C.
Superintendent, Rocky Mount Public Works		
EDMOND SHAW LYTCH	B.E. 1903	Laurinburg, N. C.
Partner, Laurinburg Machine Co.		
WILLIAM MCNEIL LYTCH	B.E. 1893	Laurinburg, N. C.
Partner, Laurinburg Machine Co.		
DONALD GRATTAN MCARN	B.E. 1915	Northside, Pittsburgh, Pa.
With Pittsburgh Transformer Co.		
JAMES ROBERT MCARTHUR	B.S. 1917	R. 6, Greenville, N. C.
Farmer		
ZEBULON ARCHIBALD MCCALL	B.S. 1919	Chapel Hill, N. C.
Law Student, University of North Carolina		
FRANK WHITESIDE MCCOMB	B.E. 1913	Bluemont, Va.
Farmer and Dairyman		
HENRY KREIGER MCCONNELL	B.S. 1907	Richmond, Va.
Manager, Richmond Branch, Tobacco By-Products and Chemical Corporation		
ALEXANDER BRYAN MCCORMICK	B.E. 1920	Fieldale, Va.
With American Cotton Woolen Mills		
EUGENE RICHARD MCCRACKEN	B.E. 1911	Winston-Salem, N. C.
Cotton Classer, Arista Mills Co.		
THOMAS ROBERT MCDEARMAN	B.E. 1914	Rocky Mount, N. C.
With J. J. Wells, Civil Engineer		
RALPH MCDONALD	B.E. 1918	Greensboro, N. C.
With Proximity Manufacturing Co.		
JAMES EDGAR MACDOUGALL	B.E. 1917	Raleigh, N. C.
Salesman, Atlantic Dyestuff Co.		
FRANK NEELY MCDOWELL	B.S. 1910	Waco, Texas
Automobile Dealer		
ROBERT WISSNER MCGEACHY	B.E. 1917	Charlotte, N. C.
With Chemical Construction Co.		
JAMES EDWARD MCGEE	B.E. 1912	Rosemary, N. C.
With Rosemary Manufacturing Co.		
HARRY GALLANT MCGINN	B.E. 1919	Spray, N. C.
With Carolina Cotton and Woolen Mills Co.		
MALCOLM ROLAND MCGIRT	B.Agr. 1905	Sanford, N. C.
Farmer		
WALTER HOGE MACINTIRE	B.S. 1905	Knoxville, Tenn.
M.S. Pennsylvania State, 1909; Ph.D. Cornell, 1916. Soil Chemist, Agricultural Experiment Station, University of Tennessee		
JOHN FAIRLY MCINTYRE	B.E. 1904	Laurinburg, N. C.
Farmer		
SAMUEL CHRISTOPHER MCKEOWN	B.E. 1895	Not located this year

Name	*Degree*	*Address*
CHARLES MCKIMMON, JR.	B.S. 1911	Ensley, Ala.
Chemist, Tennessee Coal and Iron Co.		
JAMES MCKIMMON	B.E. 1904	Raleigh, N. C.
With McKimmon & McKee, Real Estate and Insurance		
JOHN LUTHER MCKINNON	B.Agr. 1902	Laurinburg, N. C.
Farmer		
HORACE SMITH MCLENDON	B.Agr. 1906	St. Augustine, Fla.
Manager, Agricultural Development Service, Florida East Coast Railway		
LENNOX POLK MCLENDON	B.S. 1910	Durham, N. C.
Lawyer		
WALTER JONES MCLENDON, JR.	B.S. 1897	Knoxville, Tenn.
President and Manager, Prendergrast Cotton Mills of Prendergrast, Tenn.		
JAMES WALTER MCLEOD	B.S. 1916	Rowland, N. C.
Farmer		
JACOB WYATT MCNAIRY	B.E. 1917	Schenectady, N. Y.
With Railway Equipment Engineering Department, General Electric Co.		
OSCAR FRANKLIN MCNAIRY	B.E. 1907	Jacksonville, Fla.
Division Engineer, Seaboard Air Line Railway Co.		
JAMES EDGAR MCNEELY	B.E. 1904	Mooresville, N. C.
Railway Postal Clerk		
SAMUEL HUXLEY MCNEELY	B.E. 1909	Buffalo, N. Y.
Commercial Engineer, Allis-Chalmers Co.		
FRANK CORLE MCNEIL	B.E. 1917	Newport News, Va.
Engineer, Newport News Shipbuilding and Dry Dock Co.		
HARVEY CAMPBELL MCPHAIL	B.S. 1914	Mount Olive, N. C.
Dairyman and Farmer		
ELBERT MCPHAUL	B.S. 1917	Red Springs, N. C.
Farmer		
CHARLES HARDEN MCQUEEN	B.E. 1901	Boston, Mass.
With Warren Brothers Co., Bitulithic Pavements		
NEILL MCQUEEN	B.E. 1912	Not located this year
SAMUEL MACON MALLISON	B.E. 1909	Washington, N. C.
Hardware Dealer		
CARROLL LAMB MANN	B.S. 1899	Raleigh, N. C.
C.E. 1906. Professor of Civil Engineering, N. C. State College		
HARVEY BLOUNT MANN	B.S. 1920	Raleigh, N. C.
With North Carolina Agricultural Experiment Station		
LOUIS HENRY MANN	B.E. 1900	Washington, N. C.
Dentist		
WALTER RAY MANN	B.S. 1912	Paris, France
Captain of Infantry, U. S. A. Graves Registration Service		
WILLIAM LEAKE MANNING	B.E. 1910	Rosemary, N. C.
Rosemary Manufacturing Co.		
CLARENCE TALMAGE MARSH	B.E. 1908	Portland, Maine
Major, Coast Artillery Corps, U. S. A.		
WILLIAM ROYDAN MARSHALL	B.E. 1909	New York, N. Y.
Manager Industrial Department, Westinghouse Electric and Manufacturing Co.		
MARK STRUVE MARTENET	B.S. 1917	Alexandria, Va.
In Charge of Acidulating Department, Alexandria Fertilizer and Chemical Co.		
JACOB LEE MARTIN	B.E. 1911	Marion, N. C.
County Engineer, McDowell County		
THOMAS JACKSON MARTIN	B.E. 1917	Raleigh, N. C.
Instructor, N. C. State College, Mechanical Engineering Department		
WILLIAM DANIEL MARTIN	B.E. 1915	Raleigh, N. C.
Shop Foreman, Baker-Thompson Lumber Co.		
JOSEPH HENRY MASON	B.E. 1916	Philadelphia, Pa.
With C. E. Mason Co., Cotton Yarns		
RALPH CECIL MASON	B.S. 1909	Harrellsville, N. C.
Farmer		

Name	*Degree*	*Address*

ARTHUR BALLARD MASSEY....B.S. 1909....Blacksburg, Va.
Associate Professor of Plant Pathology and Bacteriology, Virginia Polytechnic Institute and Virginia Agricultural Experiment Station

PEYTON HOWARD MASSEY....B.S. 1920....R. 2, Zebulon, N. C.
Teacher of Agriculture, Wakelon School

WALTER JEROME MATHEWS....B.E. 1893....Goldsboro, N. C.
Contractor

MELVILLE LEE MATTHEWS....B.E. 1920....Raleigh, N. C.
Statistical Department, Carolina Power and Light Co.

WILLIAM EMERY MATTHEWS....B.E. 1917....Maxton, N. C.
Surveyor

ROBERT SYLVANUS MAUNEY....B.E. 1913....Kansas City, Mo.
Electrical Engineer, Kansas City Light and Power Co.

RAYMOND MAXWELL....B.E. 1906....New Bern, N. C.
President and Treasurer, Maxwell Co., Inc.

MELVIN SOLOMON MAYES....B.E. 1910....Oxford, N. C.
With Delco Light Co.

MORELL BATTLE MAYNARD....B.E. 1917....Raleigh, N. C.
With Howard E. Satterfield, Engineer-Builder

FRANK THEOPHILUS MEACHAM....B.S. 1893....Statesville, N. C.
M.S. 1894. Superintendent Experiment Station, U. S. Department of Agriculture

EUGENE FRANKLIN MEADOR....B.E. 1907....Danville, Va.
Vice President, Reynolds-Meador Service Co., Inc.

EDWARD NEWTON MEEKINS....B.S. 1920....Cary, N. C.
Assistant Teacher of Agriculture, Cary High School

TODD BOWMAN MEISENHEIMER....B.E. 1917....Charlotte, N. C.
Technical Representative, Southern Branch, A. Klipstein & Co.

ROBERT TOLAR MELVIN....B.S. 1913....Clinton, N. C.
County Farm Demonstration Agent

SHERROD ERVIN MENZIES....B.E. 1916....Bethlehem, Pa.
With Bethlehem Shipbuilding Corporation, Ltd.

HENRY BASCOM MERCER....B.E. 1912....Portsmouth, Va.
Assistant Engineer, Valuation Department, Seaboard Air Line Railway Co.

LEWIS LARKINS MERRITT....B.E. 1913....Wilmington, N. C.
Civil Engineer, Newport Shipbuilding Co.

REPTON HALL MERRITT....B.S. 1897....Raleigh, N. C.
Secretary-Treasurer, Powell & Powell, Inc., Coal and Ice

ROBERT GRAHAM MEWBORNE....B.S. 1896....Louisville, Ky.
Secretary, Tobacco By-Products and Chemical Corporation, Inc.

BENNETT TAYLOR MIAL....B.E. 1907....Philadelphia, Pa.
Manager of Erection, Belmont Iron Works

THOMAS KENNETH MIAL....B.E. 1913....Pittsburgh, Pa.
Manager, Electrical and Automotive Equipment Departments, Pittsburgh Branch, H. W. Johns-Manville Co.

FRANK CURTIS MICHAEL....B.E. 1907....Gastonia, N. C.
E.E. 1915. President, Michael & Bivens, Inc.

JOSEPH EDGAR MICHAEL....B.S. 1914....Harmony, N. C.
Teacher of Agriculture, Iredell County Farm-life School

DAVID JOHN MIDDLETON....B.Agr. 1908....Warsaw, N. C.
Farmer

GORDON KENNEDY MIDDLETON....B.S. 1917....Peking, China
Union Language School

JOHN DANIEL MILLER....B.E. 1916....Indian Head, Md.
With Bureau of Yards and Docks, U. S. Navy

JOSEPH ALFRED MILLER....B.E. 1904....Brevard, N. C.
Manager, Miller Supply Co.

WALKER MOREHEAD MILLNER....B.E. 1909....Wilmington, Del.
E. I. DuPont de Nemours Co.

JOHN MAPLE MILLS....B.E. 1907....Raleigh, N. C.
Partner, Mills Battery Co.

Name	*Degree*	*Address*
EWING STEPHENSON MILLSAPS	B.S. 1917	Statesville, N. C.
Automobile Dealer		
GRATZ BROWN MILLSAPS	B.E. 1920	Statesville, N. C.
THOMAS LEE MILLWEE	B.E. 1916	Charlotte, N. C.
With Southern Bell Telephone and Telegraph Co.		
BURTON FORREST MITCHELL	B.E. 1919	Mt. Holly, N. C.
With American Yarn and Processing Co.		
SIMON TURNER MITCHENER	B.E. 1912	Garner, N. C.
Farmer		
GRAHAM CLEMENTS MONROE	B.S. 1920	Columbus, Ohio
Student in Veterinary College of Ohio State University		
JOHN THADDEUS MONROE	B.S. 1920	Council, N. C.
Farmer		
THOMAS GUY MONROE	B.S. 1914	Hamlet, N. C.
Superintendent of Manufacturing, Buttercup Ice Cream Co.		
BENJAMIN FRANKLIN MONTAGUE	B.E. 1909	Charleston, W. Va.
With Virginian Power Co.		
HENRY STARBUCK MONTAGUE	B.S. 1907	Greenville, Miss.
President, The Delta Laboratories, Consulting and Analytical Chemists		
LEON DAVIS MOODY	B.E. 1910	East La Porte, N. C.
Farmer		
WARREN LAFAYETTE MOODY	B.S. 1914	Alexandria, Va.
Chemist, Southern Railway System		
CHARLES ALFRED MOORE	B.E. 1916	St. Louis, Mo.
Electrician, Wagner Electric Co.		
EUGENE BOISE MOORE	B.E. 1910	Morven, N. C.
Member of firm, J. E. Moore & Co.		
EUGENE JAMES MOORE	B.S. 1918	Columbus, Ohio
Veterinary Student, Ohio State University		
LACY MOORE	B.E. 1906	Washington, D. C.
Engineer of Surveys, Southern Railway System		
JAMES OSCAR MORGAN	B.Agr. 1905	College Station, Texas
M.S.A. 1907; Ph.D. 1909, Cornell University. Professor of Agronomy, Texas A. and M. College		
JESSE JOHN MORRIS	B.E. 1903	Weeksville, N. C.
Farmer, County Surveyor, and Road Commissioner		
WILLIAM FLAUD MORRIS	B.E. 1909	Clayton, N. C.
Assistant Manager, Fertilizer and Engineering Department, Ashley Horne & Son; Secretary and Treasurer, Horne & Morris Motor Co.		
JOSEPH GRAHAM MORRISON	B.Agr. 1906	Stanley, N. C.
Farmer		
ROBERT HALL MORRISON	B.E. 1900	Charlotte, N. C.
Mechanical Engineer, With Parks-Cramer Co.		
ROBERT LEE MORRISON	B.E. 1911	Bristol, Va.-Tenn.
Member of the Engineering Firm of Gladding & Morrison, Municipal Engineers, Bristol, Va.-Tenn., and Wilson, N. C.		
JOHN LIGHTFOOT MORSON	B.E. 1907	Portsmouth, Va.
Assistant Engineer, Valuation Department, Seaboard Air Line Railway		
WILLIAM FIELD MORSON	B.E. 1904	Raleigh, N. C.
Division Engineer, N. C. State Highway Commission		
LAURIE MOSELY	B.E. 1902	Atlanta, Ga.
Thompson & Mosely, Inc., Contractors		
VASSAR YOUNG MOSS	B.E. 1902	Canonsburg, Pa.
With Fort Pitt Bridge Co.		
HARRY YEOMANS MOTT	B.S. 1910	R. 4, Mooresville, N. C.
Farmer		
JAMES RICHARD MULLEN	B.S. 1912	Norfolk, Va.
Chief Probation Officer, Norfolk Juvenile and Domestic Relations Court		

Name	*Degree*	*Address*
LINDSLEY ALEXANDER MURR	B.E. 1905	Raleigh, N. C.
With the C. V. York Co., Incorporated		
EDWARD MOSBY MURRAY	B.E. 1917	Charlotte, N. C.
With Murray-Crowell Motor Co.		
WILLIAM CAREY MURRELL	B.E. 1919	Ithaca, N. Y.
Graduate Student, Cornell University		
ZACHARIAH ENNISS MURRELL, JR.	B.S. 1917	Jacksonville, N. C.
Farmer		
GARLAND PERRY MYATT	B.S. 1905	Brooklyn, N. Y.
Chemist		
O'KELLY W. MYERS	B.S. 1899	Brooklyn, N. Y.
Division Engineer, New York Water Power Investigation		
JESSE CLARENCE MYRICK	B.E. 1906	Pedro Miguel, C. Z.
Assistant Superintendent, Pacific Locks, Panama Canal		
HENRY KOLLOCK NASH, JR.	B.S. 1914	Asheville, N. C.
Bookkeeper, Wachovia Bank		
LEON ANDREWS NEAL	B.E. 1904	Marion, N. C.
President and Treasurer, Marion Ice and Fuel Co.		
WILLIAM MCCORMICK NEALE	B.E. 1910	Greensboro, N. C.
M.E. 1920. Consulting Mechanical Engineer in the Development of Special Machinery		
JOHN FRANKLIN NEELY, JR.	B.S. 1916	Pineville, N. C.
Traveling Salesman, R. T. French Co., Rochester, N. Y.		
CHARLES MCKEE NEWCOMB	B.E. 1912	Banes, Oriente, Cuba
C.E. 1920. With United Fruit Co.		
ROBERT TIMBERLAKE NEWCOMB	B.S. 1915	Raleigh, N. C.
With Caraleigh Fertilizer Co.		
CHARLES ARTHUR NICHOLS	B.E. 1902	Muskogee, Okla.
Gasoline Manufacturer and General Contractor		
EDGAR BYRON NICHOLS	B.E. 1914	Rochester, N. Y.
M.E. 1918. Chief Engineer, The Pfaudler Co.		
TYCHO NORRIS NISSEN	B.E. 1920	Winston-Salem, N. C.
Clerk, S. J. Nissen Co.		
CHARLES FRANKLIN NIVEN	B.Agr. 1906	R. 1, Ravenel, S. C.
Farmer		
LOLA ALEXANDER NIVEN	B.Agr. 1906	Birmingham, Ala.
Advertising Manager, *Progressive Farmer*		
WILLIAM TIMOTHY NIXON	B.S. 1913	Sumter, S. C.
With American Railway Express Co.		
DAVID BENJAMIN NOOE	B.S. 1916	Pittsboro, N. C.
Farmer		
JOHN ANDREW NORTHCOTT, JR.	B.E. 1918	Newport News, Va.
Electrical Draftsman, Newport News Shipbuilding and Dry Dock Co.		
LEWIS MILTON ODEN	B.Agr. 1906	Portsmouth, Va.
In Navy Yard		
THOMAS JEFFERSON OGBURN, JR.	B.E. 1906	Richmond, Va.
With Everett-Waddey Co.		
ALBERT HICKS OLIVER	B.S. 1897	Mount Olive, N. C.
Farmer		
PAUL SHEPHERD OLIVER	B.S. 1920	Marietta, N. C.
Farmer		
SAMUEL LOFTIN OLIVER	B.E. 1909	Clinton, N. C.
Manager, Ice Plant		
DWIGHT HENDRICKS OSBORNE	B.S. 1920	Yadkinville, N. C.
County Agent, Cooperative Extension Work		
HENRY BLOUNT OSBORNE	B.S. 1918	Columbus, Ohio
Senior, Veterinary Student, Ohio State University		
KARL OSBORNE	B.E. 1915	Atlanta, Ga.
With J. B. McCrary Construction Co.		

Name	*Degree*	*Address*
JAMES ELWOOD OVERTON	B.Agr. 1907	Ahoskie, N. C.
Traveling Grader, Inspector, and Peanut Buyer for American Peanut *Corporation*		
DAVID STARR OWEN	B.E. 1903	Savannah, Ga.
General Superintendent, Atlantic Turpentine and Pine Tar Co.		
EDWIN BENTLEY OWEN	B.S. 1898	Raleigh, N. C.
Registrar, N. C. State College		
CHARLES WASHINGTON OWENS	B.E. 1913	Raleigh, N. C.
Engineer and Superintendent, North Carolina Building Commission		
REID ALLISON PAGE	B.S. 1916	Aberdeen, N. C.
Farmer and Fruit Grower		
JOHN ALSEY PARK	B.E. 1905	Raleigh, N. C.
Publisher, *Raleigh Times, Fayetteville Observer, New Bern Sun-Journal, Greenville News*		
CLYDE ESTER PARKER	B.S. 1906	Raleigh, N. C.
Member of Firm, C. E. Parker & Co., Cotton Brokers and Merchants		
EUGENE LEROY PARKER	B.S. 1899	Mount Pleasant, Tenn.
Chemist and Manager, E. L. Parker & Co.		
GEORGE MASON PARKER	B.E. 1919	Norfolk, Va.
U. S. War Department, Room 15, Engineer's Office		
JAMES LAFAYETTE PARKER	B.E. 1902	Columbia, S. C.
Bridge Engineer, South Carolina State Highway Department		
JOHN HARVEY PARKER	B.E. 1903	New Bern, N. C.
President, Service Motor Corps and Tidewater Automotive Co.		
JULIUS MONROE PARKER	B.E. 1909	Louisville, Ky.
With Construction Department, Louisville and Nashville Railway		
THOMAS FRANKLIN PARKER	B.Agr. 1907	Raleigh, N. C.
M.S. 1908. Agricultural Statistician (U. S. and N. C.), Crop Reporting Service		
WALTER HERBERT PARKER	B.E. 1913	Raleigh, N. C.
FRED MAYNARD PARKS	B.E. 1907	East Pittsburgh, Pa.
Industrial Control Engineer, Westinghouse Electric and Manufacturing Co.		
THADDEUS ROWLAND PARRISH	B.E. 1913	Chicago, Ill.
Assistant Purchasing Agent, United States Gypsum Co.		
WALTER LEAK PARSONS, JR.	B.E. 1918	Rockingham, N. C.
With Leak-Parsons Co., Wholesale Grocers		
ARTHUR LEE PASCHAL	B.Agr. 1907	Riverside, Cal.
Agent for *The Golden Age*, and for *The Finished Mystery*		
JOHN GILBERT PASCHAL	B.E. 1909	R. 2, Florence, S. C.
Lumber Manufacturer		
WILLIAM FRANKLIN PATE	B.S. 1901	Raleigh, N. C.
M.S. 1913. With Soil Fertility Section, Division of Agronomy, N. C. Department of Agriculture		
MANN CABE PATTERSON	B.E. 1895	Durham, N. C.
ROBERT DONNELL PATTERSON	B.S. 1894	Chase City, Va.
M.S. 1898. President, The First State Bank		
FITZGERALD ELIZUR PATTON	B.S. 1914	Bud, Ky.
Farmer		
WILLIAM JOEL PATTON	B.E. 1904	Dallas, Texas
Manager, New Business Department, Dallas Power and Light Co.		
WILLIAM ROBERT PATTON	B.E. 1914	New Smyrna, Fla.
City Manager		
ROBERT JAMES PEARSALL	B.E. 1920	Wilkinsburg, Pa.
Student, Westinghouse Electric and Manufacturing Co.		
WILLIAM VICTOR PEARSALL	B.S. 1915	Wilmington, N. C.
Pearsall & Co.		
CHARLES PEARSON	B.E. 1894	Atlanta, Ga.
Superintendent, Atlantic Bridge Co. of Roanoke, Va.		
FRED TAYLOR PEDEN	B.S. 1911	Springdale, N. C.
Agent in Animal Husbandry, North Carolina Department of Agriculture		
JAMES MURCHISON PEDEN	B.E. 1920	Pittsburgh, Pa.
Student in Industrial Sales, Westinghouse Electric and Manufacturing Co.		

Name	*Degree*	*Address*

JOHN TAYLOR PEDEN....B.E. 1911....Pittsburgh, Pa.
Salesman, Westinghouse Electric and Manufacturing Co.

THOMAS CLAYTON PEGRAM....B.E. 1916....McColl, S. C.
Superintendent, Marlboro Cotton Mill No. 3

JAMES HICKS PEIRCE....B.S. 1905....Warsaw, N. C.
Owner, J. H. Peirce Manufacturing Co., Sash, Doors, and Blinds

WILLIAM CASPER PENNINGTON....B.E. 1910....New London, N. C.
Secretary-Treasurer, The New London Hosiery Co.

SAMUEL OSCAR PERKINS....B.S. 1906....Washington, D. C.
Soil Scientist, U. S. Department of Agriculture

MILTON VANCE PERRY....B.E. 1914....Elizabeth City, N. C.
Retail Grocer

EUGENE GRAY PERSON....B.S. 1899....Macon, Ga.
Train Dispatcher, Central of Georgia Railway

WILLIAM MONTGOMERY PERSON....B.E. 1900....Birmingham, Ala.
With Semet-Solvay By-Product Coke Plant, of Ensley, Ala.

ASA GRAY PHELPS....B.E. 1915....Newport News, Va.
Technicist, Newport News Shipbuilding and Dry Dock Co.

FREDERICK COLWELL PHELPS....B.E. 1904....Washington, D. C.
Major Infantry, Care Adjutant General of Army

ARTHUR JEFFERSON PHILLIPS, JR....B.E. 1914....Portsmouth, Va.
Real Estate

CHARLES FULLER PHILLIPS....B.S. 1920....Amelia, Va.
County Agent, U. S. Department of Agriculture

HENRY MARRIOTT PHILLIPS....B.S. 1914....Battleboro, N. C.
Farmer

WILLIAM RANSOM PHILLIPS....B.E. 1910....Richmond, Va.
E.E. 1913. Appliance Specialist, Western Electric Co.

PETER PENICK PIERCE....B.E. 1909....St. Augustine, Fla.
Assistant Engineer, Construction Department, Florida East Coast Railway

ROSS DUNSFORD PILLSBURY....B.E. 1920....Charlotte, N. C.
Structural Engineer, Southern Engineering Co.

GUY PINNER....B.E. 1907....New York, N. Y.
C.E. 1912. Project Manager, James Stewart & Co., Inc.

JOHN GAY PINNER....B.S. 1915....Elizabeth City, N. C.
New Bern Produce Co.

WINSLOW GERALD PITMAN....B.E. 1907....Lumberton, N. C.
Farmer

PAUL NATHANIEL PITTENGER....B.E. 1911....Raleigh, N. C.
1905 Park Drive

BENJAMIN FRANKLIN PITTMAN....B.E. 1908....Philadelphia, Pa.
With Wm. Cramp & Sons, Ship and Engine Building Company

LAWRENCE LYON PITTMAN....B.E. 1908....Whitakers, N. C.
Civil Engineer and Farmer

PAUL MILLER PITTS....B.E. 1909....Birmingham, Ala.
Machinist, Tennessee Coal, Iron and Railroad Co.

ANGELO BETTLENA PIVER....B.E. 1906....Newark, N. J.
Assistant Engineer, Submarine Boat Corporation, Newark Bay Shipyard

WILLIAM CRAWFORD PIVER....B.S. 1906....New York, N. Y.
Riches, Piver & Co., Chemical and Color Manufacturers

JAMES KEMP PLUMMER....B.S. 1907....New York, N. Y.
M.S. 1909; Ph. D. 1915. Cornell. Chief Chemist, General Development Co.

ROBERT AVERY PLYLER....B.E. 1914....Waxhaw, N. C.
Farmer

PLEASANT H. POINDEXTER, JR....B.Agr. 1905....Vici, Okla.
Manager, The Long-Bell Lumber Co.

FREDERICK DAVIS POISSON....B.S. 1914....Not located this year

JULIAN HAWLEY POOLE....B.S. 1917....Jackson Springs, N. C.
Orchardist

RUBLE ISAAC POOLE....B.E. 1908....Raleigh, N. C.
Civil Engineer

Name	*Degree*	*Address*
EDWARD GRIFFITH PORTER	B.E. 1905	Goldsboro, N. C.
The Porter-Obee Co., Civil Engineers and Surveyors		
EDWIN THEODORE PORTER	B.E. 1920	Georgetown, S. C.
Teller, Planters and Mechanics Bank		
JUNIUS EDWARD PORTER	B.E. 1900	Aurora, N. C.
President and Treasurer, J. E. Porter Co.		
TRACY WINCHESTER PORTER	B.S. 1914	Not located this year
BRYANT MONROE POTTER	B.E. 1912	New Bern, N. C.
Civil Engineer		
WILLIAM OWEN POTTER	B.E. 1919	Baltimore, Md.
Standard Oil Company		
ZEB. VANCE POTTER	B.E. 1914	Spray, N. C.
Assistant Manager, Nantucket and Lily Mills		
HARRY ALEXANDER POWELL	B.E. 1908	Jacksonville, Fla.
Naval Stores Operator		
JAMES ALEXANDER POWELL	B.E. 1908	Reading, Pa.
Mechanical Engineer, W. S. Barstow Management Association		
JOEL POWERS	B.E. 1903	Goldsboro, N. C.
Draftsman, Dewey Bros., Inc.		
THOMAS MILTON POYNER	B.E. 1908	Charleston, S. C.
With Jefferson Construction Co.		
PALMER WILLIAM PRESSLY	B.E. 1919	R. 1, Plant City, Fla.
Electrician, Swift & Co.		
JAMES BRUCE PRICE	B.E. 1910	South Charleston, W. Va.
Electrical Engineer, U. S. Naval Ordnance Plant		
JOHN MOIR PRICE	B.E. 1909	New York, N. Y.
Sales Engineer, Electro-Metallurgical Sales Corporation		
JOHN BAILEY PRIDGEN	B.E. 1916	Greensboro, N. C.
Construction Engineer, Second Division, N. C. State Highway Commission		
ABRAM HINMAN PRINCE	B.S. 1895	R. 1, Beaumont, Texas
Superintendent, Substation No. 4, State Experiment Station		
CHARLES MARCELLUS PRITCHETT	M.E. 1895	Richmond, Va.
C.E. 1896. Locating Engineer, State Highway Commission		
VICTOR VASHTI PRIVOTT	B.E. 1895	Suffolk, Va.
Mechanic and Electrician		
FRANK WILSON PROCTER	B.E. 1915	Baltimore, Md.
General Engineer, Black & Decker Manufacturing Co.		
CARL CLAWSON PROFFITT	B.S. 1915	Asheville, N. C.
County Agent, Buncombe County		
CHARLES LANDON PROFFITT	B.S. 1915	Marshall, N. C.
County Agent, Madison County		
THOMAS HECTOR PURCELL	B.S. 1913	Not located this year
JACK ADDISON PUREFOY	B.S. 1916	Asheville, N. C.
HENRY AUBREY QUICKEL	B.S. 1913	Charlotte, N. C.
With American Telephone and Telegraph Co.		
JOSEPHUS PLUMMER QUINERLY	B.S. 1911	Bishopville, S. C.
Lee County Agricultural Agent		
MILLARD REED QUINERLY	B.S. 1914	Miami, Fla.
Manager, R. C. Gardner Tire Co.		
WALTER ROSCOE RADFORD	B.S. 1917	Spruce Pine, N. C.
With N. C. and U. S. Departments of Agriculture		
DILLARD CHARLES RAGAN	B.E. 1920	Charlotte, N. C.
Laboratory Work, National Aniline and Chemical Co.		
OLIVER RAMSAUR	B.E. 1920	Raleigh, N. C.
Carolina Power and Light Co.		
PARKER ROYALL RAND	B.S. 1916	R. 2, Garner, N. C.
Farmer		
HENRY RANKIN	B.E. 1916	Gastonia, N. C.
Vice President and Treasurer, Rankin Mills, Inc., Ridge Mills, Inc., and Pinkney Mills, Inc.		

Name	*Degree*	*Address*
JOHN OLAN RANKIN, JR.	B.S. 1913	Gastonia, N. C.
WILLIAM WALTER RANKIN	B.E. 1904 Professor Mathematics, Agnes Scott College	Decatur, Ga.
JOHN DUNCAN RAY	B.S. 1915 D.V.M. 1917. With Kinsley Laboratories	Kansas City, Mo.
LEWIS BANKS RAY	B.E. 1916 Steam Turbine Designer, Allis-Chalmers Manufacturing Co.	Milwaukee, Wis.
DAVID MILLER REA	B.E. 1917 Instructor, University North Carolina	Chapel Hill, N. C.
HUGH CALVIN REA	B.S. 1916 D.V.M. Kansas City Veterinary College, 1918. Veterinarian	Charlotte, N. C.
JAMES LATHAN REA	B.S. 1919 With F. S. Royster Guano Co.	Charlotte, N. C.
RISDEN PATTERSON REECE	B.E. 1904 Mechanical Engineer, Engineering Department, R. J. Reynolds Tobacco Co.	Winston-Salem, N. C.
JOHN BARTOW REES	B.E. 1914 Machine Switching Equipment Engineer, Southern Bell Telephone and Telegraph Co., and Cumberland Telephone and Telegraph Co., Inc.	Atlanta, Ga.
ROBERT RICHARD REINHARDT	B.S. 1909 Veterinarian	Lincolnton, N. C.
WILLIAM BENEDICT REINHARDT	B.E. 1902 Farmer	Stanley, N. C.
CALEB EDWARD RHODES	B.E. 1920 Graduate Student, Westinghouse Electric and Manufacturing Co.	Wilkinsburg, Pa.
VICTOR ARTHUR RICE	B.S. 1917 Assistant Professor of Animal Husbandry, Massachusetts Agricultural College	Amherst, Mass.
ROGER FRANCIS RICHARDSON	B.E. 1900 Construction Engineer, Semet-Solvay Co.	Birmingham, Ala.
WILLIAM RICHARDSON, JR.	B.E. 1904 Assistant Superintendent, Coal Washeries, Coal Mining Department, Tennessee Coal, Iron and Railroad Co.	Ensley, Ala.
EDWARD HAYES RICKS	B.E. 1903 Real Estate Dealer	Roanoke Rapids, N. C.
WALLACE WHITFIELD RIDDICK	B.E. 1916 Secretary-Treasurer, Demopolis Cotton Mills	Demopolis, Ala.
LOUIS NAPOLEON RIGGAN	B.E. 1912 Chief Clerk to Chief Engineer, Seaboard Air Line Railway	Norfolk, Va.
ALFRED PRATTE RIGGS	B.E. 1909 With South Florida Contracting and Engineering Co.	West Palm Beach, Fla.
RAY MILLER RITCHIE	B.S. 1916 Teacher of Vocational Agriculture	Charlotte Courthouse, Va.
WILLIAM LEWIS ROACH	B.E. 1920 Assistant Engineer, City of Raleigh	Raleigh, N. C.
THURMAN LESTER ROBERSON	B.E. 1914 With Order Department, Newport News Shipbuilding and Dry Dock Co.	Newport News, Va.
DANIEL ERNEST ROBERTS	B.S. 1914 Teacher of Agriculture, Rich Square High and Farm-life School	Rich Square, N. C.
JOHN MORGAN ROBERTS	B.S. 1914	Not located this year
PHILIP AUSTIN ROBERTS	B.E. 1916 With W. M. Piatt, Municipal Engineer	Tarboro, N. C.
ARCHIE KNIGHT ROBERTSON	B.S. 1912 Wayne County Farm Demonstration Agent	Goldsboro, N. C.
DURANT WAITE ROBERTSON	B.E. 1906 Vice President and Treasurer, J. W. Hunt & Co., Paint Manufacturers	Washington, D. C.
HORACE BASCOMB ROBERTSON	B.E. 1917 With Cannon Manufacturing Co.	Kannapolis, N. C.
JOHN PAUL ROBERTSON	B.S. 1916 Farmer	Rowland, N. C.
JOSEPH HENRY ROBERTSON	B.E. 1909 With North Carolina Public Service Co.	Salisbury, N. C.

Name	*Degree*	*Address*
RALPH REED ROBERTSON	B.E. 1920	Charlotte, N. C.
Engineer, Southern Engineering Co.		
GEORGE RANDOLPH ROBINSON	B.E. 1919	Lynn, Mass.
Student Engineer, General Electric Co.		
JAY FREDERICK ROBINSON	B.E. 1910	Newport News, Va.
Draftsman, Newport News Shipbuilding and Dry Dock Co.		
ZEB BLAINE ROBINSON	B.E. 1916	Weaverville, N. C.
Lumber Dealer		
GASTON WILDER ROGERS	B.E. (Elec.) 1903	Atlanta, Ga.
B.E. (Civil) 1905. Captain, Medical Corps, U. S. Army		
JAMES HENRY ROGERS	B.S. 1917	Roxboro, N. C.
Part Owner and Manager, Ioka Stock Farm		
WILLIAM HAYWOOD ROGERS, JR.	B.E. 1916	Greenville, N. C.
Engineer, Pitt County Highway Commission		
JOHN WESLEY ROLLINSON	B.E. 1911	Savannah, Ga.
President, Delta Electric Co.		
WILLIAM EDWIN ROSE	B.E. 1900	Washington, D. C.
Ordnance Department, United States Government		
CHARLES BURDETTE ROSS	B.E. 1903	Charlotte, N. C.
Secretary and Treasurer, Model Steam Laundry Co.		
FLOYD DE ROSS	B.E. 1900	Lawton, Okla.
Owner, Lawton Coca-Cola Bottling Co., Altus Coca-Cola Bottling Co., Altus, Okla; Duncan Coca-Cola Bottling Co., Duncan, Okla.; Frederick Coca-Cola Bottling Co., Frederick, Okla.		
GEORGE ROMULUS ROSS	B.S. 1911	Jackson Springs, N. C.
GRAEME ROSS	B.E. 1911	Joplin, Mo.
Manager, Joplin Office, Westinghouse Electric and Manufacturing Co.		
JOE WILLIAM ROSS	B.S. 1914	R. 2, Fort Mill, S. C.
Farmer		
LANDON COATS ROSSER	B.E. 1915	Sanford, N. C.
Sheriff Lee County		
EMERY PELL ROUSE	B.E. 1914	LaGrange, N. C.
With the Rouse Banking Co.		
LINDLEY MURRAY ROWE	B.E. 1916	Davenport, Iowa
Chiropractic School, 428 East Seventh Street		
GARLAND THOMAS ROWLAND	B.E. 1913	Camp Benning, Ga.
First Lieutenant, 29th Infantry		
HORACE RALPH ROYSTER	B.E. 1918	Shelby, N. C.
Assistant Superintendent, Belmont Cotton Mills, Shelby, N. C.		
JAMES MALCOLMSON RUMPLE	B.E. 1917	Columbus, Ohio
Engineer, Chemical Construction Co.		
HENRY FRED RUSH	B.S. 1916	Laurens, S. C.
Government Cotton Grader		
AUGUSTINE JOSEPH RUSSO	B.E. 1916	Norfolk, Va.
Draftsman, Scientific Section, C. and R. Drafting Rooms, Navy Yard		
CARL COLLINS SADLER	B.E. 1910	Dutch Guiana, S. A.
Engineer, Care Surinaamsche Bauxite Maatschappij, Paramaribo, Dutch Guiana		
JAMES OLIN SADLER	B.E. 1909	Washington, D. C.
With Hyde & Baxter		
DAVID MORTON SAINTSING	B.E. 1917	Newport News, Va.
Inspector for Newport News Shipbuilding and Dry Dock Co.		
MARION POLK SANFORD	B.S. 1919	R. 1, Stem, N. C.
Farmer		
CECIL VANN SAUNDERS	B.E. 1920	Wilkinsburg, Pa.
Graduate Student Course, Westinghouse Electric and Manufacturing Co.		
JOHN HYER SAUNDERS	B.E. 1894	Kinston, N. C.
Locomotive Engineer, Atlantic Coast Line Railroad		
WILLIS HUNTER SAUNDERS	B.S. 1897	Not located
DANIEL RUSSELL SAWYER	B.S. 1918	Harrison, N. J.
With Swift & Co.		

Name	*Degree*	*Address*
IRA OBED SCHAUB	B.S. 1900	Washington, D. C.
Agriculturist and Field Agent, U. S. Department of Agriculture		
JOHN FRANKLIN SCHENCK, JR.	B.E. 1914	Shelby, N. C.
Treasurer, Lily Mill and Power Co.		
LEON JACOB SCHWAB	B.E. 1907	Savannah, Ga.
Junior Engineer, U. S. Engineer Office		
ROBERT WALTER SCOTT, JR.	B.Agr. 1905	Bolton, N. C.
Farmer		
WILLIAM KERR SCOTT	B.S. 1917	Ha River, N. C.
Farmer		
EARLE ALOYSIUS SEIDENSPINNER	B.S. 1910	Not located this year
CLEMENT OSCAR SEIFERT	B.E. 1916	Haverhill, Mass.
With Coca-Cola Bottling Co.		
DAVID WALTER SEIFERT	B.E. 1913	Weldon, N. C.
General Manager, Coca-Cola Bottling Companies of Weldon, N. C., and Woonsockett, R. I.		
JOHN WILLIAM SEXTON	B.E. 1910	Hamlet, N. C.
Engineer, Seaboard Air Line Railway		
NATHAN STOWE SHARP	B.E. 1916	Mason City, Iowa
With Burroughs Adding Machine Co.		
CHARLES ANTHONY SHEFFIELD	B.S. 1920	R. 3, Linwood, N. C.
Agricultural Teacher, State Board of Vocational Education		
JAMES MORGAN SHERMAN	B.S. 1911	Washington, D. C.
M.S. 1912; Ph.D. 1915, University of Wisconsin. Bacteriologist, U. S. Department of Agriculture		
FLEMING BATES SHERWOOD	B.S. 1912	Tulsa, Okla.
M.S. 1915. With Cosden & Co.		
FRANCIS WEBBER SHERWOOD	B.S. 1909	Raleigh, N. C.
M.S. 1911. Assistant Chemist, N. C. Agricultural Experiment Station		
WALTER DUPRE SHIELDS	B.E. 1919	East Point, Ga.
Dyer, With Couch Brothers Manufacturing Co.		
ROBERT ARNOLD SHOPE	B.E. 1909	Atlanta, Ga.
Traveling Salesman		
FRANK PIERCE SHORE	B.E. 1920	New Bern, N. C.
With Eagle Engineering Co.		
JOHN WADE SHORE	B.S. 1900	Boonville, N. C.
Cashier, Commercial and Savings Bank		
IRA SHORT	B.E. 1911	Essington, Pa.
Assistant Engineer, Marine Engineering Department, Westinghouse Electric and Manufacturing Co., S. Phila. Works		
JOHN HOUSTON SHUFORD	B.S. 1903	Charlotte, N. C.
With National Aniline and Chemical Co.		
JOHN OSCAR SHUFORD	B.E. 1907	Lincolnton, N. C.
Secretary and Treasurer, John Rudisill Manufacturing Co.		
WILLIAM TALMAGE SHULL	B.E. 1912	Newport, N. C.
Civil Engineer, Shull Construction Co.		
WALTER LEIGH SHUPING	B.E. 1919	Charlotte, N. C.
Sales Engineer, Westinghouse Electric and Manufacturing Co.		
THOMAS PARK SIMMONS	B.E. 1917	Truxillo, Honduras, C. A.
With Truxillo Railroad Co.		
JOHN ASA SIMMS	M.S. 1917	Storrs, Conn.
Extension Animal Husbandman, Storrs, Conn.		
GEORGE GRAY SIMPSON	B.E. 1909	Norfolk, Va.
With T. S. Southgate & Co., Wholesale Brokers		
WILLIAM DUDLEY SIMPSON	B.E. 1913	Tampa, Fla.
Division Engineer, Seaboard Air Line Railway Co.		
FREDERICK ERASTUS SLOAN	B.S. 1899	Dallas, Texas
General Agent, Felt and Tarrant Manufacturing Co.		
KARL SLOAN	B.E. 1916	Statesville, N. C.
Engineer and Contractor		
ROBERT LEE SLOAN	B.S. 1913	Colfax, La.
County Farm Demonstration Agent		

Name	*Degree*	*Address*
WILLIAM NEVILLE SLOAN	B.E. 1909	Franklin, N. C.
Examiner of Surveys, U. S. Government Forest Service		
ALLEN ERNEST SMITH	B.S. 1918	Hope Mills, N. C.
Farmer and Teacher		
ANDREW THOMAS SMITH	B.S. 1899	Newport News, Va.
With Plant Engineer's Department, Newport News Shipbuilding and Dry Dock Co.		
BASCOM PIERCE SMITH	B.E. 1916	West Allis, Wis.
Estimator, Steam Turbine Department, Allis-Chalmers Co.		
EDGAR ENGLISH SMITH	B.E. 1908	Seattle, Wash.
Engineer, War Department, United States Government		
EDWIN HARRISON SMITH	B.E. 1910	Weldon, N. C.
With Bank of Weldon		
EDWARD OSCAR SMITH	B.E. 1901	Newport News, Va.
With Newport News Shipbuilding and Dry Dock Co.		
FRANCIS CLARK SMITH	B.E. 1913	Clinton, N. C.
Resident Engineer, State Highway Commission		
FRANK STEED SMITH	B.E. 1913	Savannah, Ga.
Division Traffic Supervisor, Southern Bell Telephone and Telegraph Co.		
JAMES LAWRENCE SMITH, JR.	B.E. 1908	Norfolk, Va.
Inspector of Fire Risks, Seaboard Air Line Railway		
JAMES MCCREE SMITH	B.S. 1912	Not located this year
JONATHAN RHODES SMITH	B.E. 1905	Bethlehem, Pa.
Engineer of Structures, Bethlehem Shipbuilding Corporation		
ORUS WILDER SMITH	B.E. 1912	Chicago, Ill.
District Service Manager, Splitdorf Electrical Co.		
WALTER HERBERT SMITH	B.E. 1914	Pittsburgh, Pa.
Railway Equipment Division, Engineering Department, Westinghouse Electric and Manufacturing Co.		
WALTER JOHNSTON SMITH, JR.	B.S. 1915	R. 3, Scotland Neck, N. C.
Farmer		
WHITEFORD INGERSOLL SMITH	B.E. 1915	Biltmore, N. C.
Assistant Superintendent, Asheville Mica Co.		
WM. NATHAN HARRELL SMITH, JR.	B.E. 1920	Raleigh, N. C.
WILLIAM TURNER SMITH	B.E. 1900	Duke, N. C.
Civil Engineer		
THOMAS JEHU SMITHWICK	B.S. 1897	Mount Airy, N. C.
Consulting and Erecting Engineer		
PAUL ELWOOD SNEAD	B.E. 1916	Reidsville, N. C.
With Signal Department, Southern Railway		
RUSSELL ELSTNER SNOWDEN	B.E. 1902	Kinston, N. C.
Division Highway Engineer, North Carolina State Highway Commission		
JOSEPH MCKAY SPEARS	B.E. 1915	Lillington, N. C.
Manager, Standard Sand and Gravel Co.		
JOHN HENRY SPEAS	B.S. 1916	East Bend, N. C.
Fertilizer Salesman		
EDWARD PINKNEY SPEER	B.E. 1912	Waco, Texas
Superintendent of Shops, Texas Light and Power Co.		
COLIN GEORGE SPENCER	B.S. 1913	Carthage, N. C.
Lumber and Timber Dealer		
HERBERT SPENCER	B.S. 1915	Raleigh, N. C.
M.S. 1917. Assistant Professor of Entomology and Zoology, N. C. State College		
JOHN DAVIDSON SPINKS	B.E. 1905	Winston-Salem, N. C.
C.E. 1913. Civil Engineer		
JESSE PAGE SPOON	B.Agr. 1908	Burlington, N. C.
M.S. 1909; D.V.S. 1911, Kansas City Veterinary College. Veterinarian		
ST. JULIEN LACHICOTTE SPRINGS	B.S. 1910	Smithfield, N. C.
Whitehead & Springs, Wholesale and Retail Builders' Supplies		
ROBERT PINKNEY STACEY	B.E. 1920	Wilkinsburg, Pa.
Assistant Engineer, Duquesne Light Co.		

Name	*Degree*	*Address*
ERVIN BLACKENEY STACK	B.E. 1905	Monroe, N. C.
Electrical Engineer and Chemist		
TALMAGE HOLT STAFFORD	B.S. 1912	Raleigh, N. C.
Alumni Secretary, N. C. State College		
CHARLES BURT STAINBACK	B.E. 1910	East Pittsburgh, Pa.
Manager, Industrial Contract Department, Westinghouse Electric Co.		
JOHN ALPHEUS STALLINGS	B.E. 1917	Newport News, Va.
Draftsman, Newport News Shipbuilding and Dry Dock Co.		
EDWARD ROE STAMPS	B.E. 1903	Macon, Ga.
Division Superintendent, Southern Division, F. S. Royster Guano Co.		
HARRIS INGRAM STANBACK	B.E. 1910	Harrison, N. J.
Superintendent, Edison Lamp Works, General Electric Co.		
JEFFREY FRANKLIN STANBACK, JR.	B.S. 1916	New York, N. Y.
Narcotic and Prohibition Chemist, Bureau of Internal Revenue		
CHARLES WHITSON STANFORD, JR.	B.S. 1917	R. 1, Teer, N. C.
Farmer		
ERNEST ELWOOD STANFORD	M.S. 1917	Cleveland, Ohio
Professor of Pharmacognosy, Western Reserve University		
NUMA REID STANSEL	B.S. 1898	El Paso, Tex.
E.E. 1901. Local Manager, Southwest General Electric Co.		
THOMAS BARNES STANSEL	B.S. 1910	Copperhill, Tenn.
Acid Department, Tennessee Copper Co.		
CLARENCE ALEXANDER STEDMAN	B.S. 1912	Arlington, N. J.
Supervisor of Inspection, E. I. DuPont de Nemours & Co.		
ALEXIS PRESTON STEELE	B.S. 1899	Statesville, N. C.
Mechanical Engineer, Firm of J. C. Steele & Sons		
JOHN BROWN STEELE	B.S. 1913	Yadkin Valley, N. C.
Farmer		
LUCIUS ESEK STEERE, JR.	B.E. 1911	Washington, D. C.
Assistant Electrical Engineer, Potomac Electric Power Co.		
SAMUEL FATIO STEPHENS	B.E. 1909	Norfolk, Va.
Vice President, Physicians and Surgeons Supply Co.		
NEEDHAM BRYAN STEVENS	B.S. 1912	Plymouth, N. C.
Merchant		
JAMES GRAY STOKES	B.S. 1919	Burgaw, N. C.
Life Underwriting		
REUBEN BENNETT STOTESBURY	B.S. 1917	Columbus, Ohio
Veterinary Student, Ohio State University		
MICHAEL ALFRED STOUGH	B.E. 1917	Chattanooga, Tenn.
With the DuPont Co.		
WILLIAM BEEVER STOVER	B.E. 1913	Newark, N. J.
With Sales Department, Westinghouse Electric and Manufacturing Co.		
CHARLIE BERRYHILL STOWE	B.S. 1913	R. 4, Charlotte, N. C.
Farmer and Dairyman		
GEORGE YATES STRADLEY	B.E. 1903	Pencoyd, Pa.
With American Bridge Co.		
JOHN SNIPES STROUD	B.E. 1908	Cooleemee, N. C.
Assistant Manager and Superintendent, The Erwin Cotton Mills Co.		
JOHN GUY STUART	B.S. 1920	Jackson Springs, N. C.
Farmer		
WALTER STEPHEN STURGILL	B.E. 1901	Fort Sill, Okla.
Major of Field Artillery		
WILLIAM CLARK STYRON	B.E. 1910	Newport News, Va.
Engineering Department, Newport News Shipbuilding and Dry Dock Co.		
TEISAKU SUGISHITA	B.S. 1898	Japan
Not heard from since Russo-Japanese War		
BEVERLY NATHANIEL SULLIVAN	B.S. 1901	Winston-Salem, N. C.
JACOB NEELEY SUMMERELL	B.E. 1919	Cramerton, N. C.
With Cotton Mill Co.		
THOMAS BRYAN SUMMERLIN	B.E. 1910	Mount Olive, N. C.
Summerlin Implement Co.		

Name	*Degree*	*Address*

HENRY NEWBOLD SUMNER....B.E. 1909....Charleston, S. C.
Major, Coast Artillery Corps. Professor of Military Science and Tactics, Porter Military Academy

WILBUR BURNETTE SUMNER....B.E. 1916....Germany
First Lieutenant, Field Artillery, American Forces

DENNIS HOWARD SUTTON....B.S. 1920....Bladenboro, N. C.
Principal, Bladenboro High School

LLOYD HURST SWINDELL....B.E. 1911....Raleigh, N. C.
Farmer

LOUIS JOSEPH SWINK....B.E. 1917....Belmont, N. C.
Overhauling Machinery, Sterling Spinning Co.

STANTON BANKS SYKES....B.E. 1913....Chicago, Ill.
Industrial Control Specialist, General Electric Co.

VANCE SYKES....B.E. 1907....Hamlet, N. C.
Division Engineer, Seaboard Air Line Railway

GEORGE FREDERICK SYME....B.S. 1898....Raleigh, N. C.
C.E. 1907. Supervising Engineer, State Highway Commission

RICHARD FRAZIER TABOR....B.E. 1920....L'Anse, Michigan
Resident Engineer, State Highway Department

FREDDIE JACKSON TALTON....B.Agr. 1906....Pikeville, N. C.
Farmer

GURDON LUCIUS TARBOX....B.E. 1917....Plainfield, N. J.
Investigating Engineer, Spicer Manufacturing Corporation

CLAUDE STRATON TATE....B.E. 1909....Littleton, N. C.
Proprietor of Garage and Machine Shop

DANIEL MCGILVARY TATE....B.S. 1915....Parkerton, Wyo.
Farmer

REUBEN L. TATUM....B.E. 1916....Raleigh, N. C.
With State Highway Commission

ALFRED TENNYSON TAYLOR....B.S. 1916....Raleigh, N. C.
With Food and Oil Division, N. C. Department of Agriculture

ARTHUR WILLIS TAYLOR....B.E. 1912....Baltimore, Md.
B.E. 1919. Special Apprentice, Baltimore and Ohio Railroad, Mt. Clare Shops

CULVER MURAT TAYLOR....B.E. 1912....Tarboro, N. C.

HERBERT LEE TAYLOR....B.E. 1912....Baltimore, Md.
Foreman, Baltimore and Ohio Railroad, Mt. Clare Shops

WALTER CLYBURN TAYLOR....B.E. 1913....Hickory, N. C.
T.E. 1916. The Taylor Knitting Mills

ARTHUR LEE TEACHEY....B.S. 1915....Pleasant Garden, N. C.
Agriculturist, Pleasant Garden Farm-life School

BEN TEMPLE....B.S. 1917....Mitchell, Va.
Farmer

JAMES CLARENCE TEMPLE....B.S. 1904....Ocala, Fla.
M.S. 1908. Farmer

MALVERN HILL TERRELL....B.E. 1909....Ronceverte, W. Va.
Chief Electrician, Virginia Western Power Co.

ROGER VERNON TERRY....B.E. 1918....Newport News, Va.
Engineering Department, Estimating Division, Newport News Shipbuilding and Dry Dock Co.

JOHN SAM THOMPSON....B.S. 1912....Woodville, N. C.
Farmer

GEORGE LOGAN THOMPSON....B.E. 1912....Raleigh, N. C.
With Carolina Power and Light Co.

THOMAS HAMPTON THOMPSON....B.E. 1910....Greensboro, N. C.
Chief Clerk to C. A. Pamplin, Southern Railway

THOMAS WHITMELL THORNE....B.E. 1911....Atlanta, Ga.
Salesman, National Tube Co., Pittsburgh, Pa.

DANIEL WOOD THORP, JR....B.E. 1914....Charleston, S. C.
Engineer, Folly Beach Corporation

LOUIS DALE THRASH....B.S. 1914....Rutherfordton, N. C.
County Agricultural Demonstration Agent

Name — *Degree* — *Address*

GEORGE WILLIAM TIENCKEN....B.E. 1920....Schenectady, N. Y.
With General Electric Co.

LUTHER RUSSELL TILLETT....B.E. 1907....Port Lebak, Mindanao, P. I.
With Port Lebak Lumber Co., Inc.

RICHARD HENRY TILLMAN....B.E. 1906....Baltimore, Md.
Manager, New Business Department, Consolidated Gas, Electric Light and Power Co.

WILLIAM SIDNEY TOMLINSON....B.E. 1906....Columbia, S. C.
President, Tomlinson Engineering Co.

JAMES EDWIN TOOMER....B.S. 1909....Toronto, Canada
Department of Metallurgy, University of Toronto

JAMES RICHARD TOWNSEND....B.E. 1914....Wilmington, N. C.
First Lieutenant, Coast Artillery Corps, United States Army

JESSE ERNEST TREVATHAN....B.S. 1915....Laurens, S. C.
Farm Demonstration Agent for Laurens County

MARION FRANCIS TRICE....B.S. 1920....Elizabeth, N. J.
Chemist, With Ellis-Foster Co., Montclair, N. J.

GEORGE REID TROTTER....B.E. 1912....Charlotte, N. C.
Vice President and Treasurer, Electrical Constructors Co.

GEORGE BOSTON TROXLER....B.S. 1918....Brown Summit, N. C.
Merchant

WILLIAM BROOKS TRUITT....B.E. 1907....Greensboro, N. C.
General Manager of Production, Carolina Steel and Iron Co.

FRED GOODE TUCKER....B.E. 1911....Charlotte, N. C.
Cotton Gin Salesman

ISAAC NORRIS TULL....B.E. 1910....Cleveland, Ohio
Electrical Engineer, The McKinney Steel Co.

JOHN EDWIN TURLINGTON....B.Agr. 1907....Gainesville, Fla.
M.S., Ph.D., Cornell University. Professor of Agronomy, University of Florida, College of Agriculture

ERNEST CRAIG TURNER....B.S. 1917....Mountain City, Tenn.
County Agent

JOSEPH PLATT TURNER....B.E. 1902....Leaksville, N. C.
Grocer

WILLIAM HARRISON TURNER....B.E. 1893....Winston-Salem, N. C.
Wholesale Dealer and Manufacturer of Feedstuffs

JACKSON CORPENING TUTTLE....B.E. 1906....Baltimore, Md.
Industrial Power Department, Consolidated Gas, Electric Light and Power Co.

NAPOLEON BONAPARTE TYLER....B.S. 1917....Auburn, Ala.
Student of Veterinary Medicine, Alabama Polytechnic Institute

GROVER WILLIAM UNDERHILL....B.S. 1916....Field Station, Chester, Va.
M.S. 1918. Assistant Entomologist, Virginia Crop Pest Commission

ROBERT PEELE UZZELL....B.Agr. 1906....Goldsboro, N. C.
Farmer and Real Estate Dealer

PETER VALAER, JR....B.S. 1906....Washington, D. C.
M.S. 1913, George Washington University. Assistant Chemist, Bureau of Internal Revenue

LILLIAN LEE VAUGHAN....B.E. 1906....Raleigh, N. C.
Professor of Mechanical Engineering, N. C. State College

WARNER MINNIEWEATHER VERNON....B.S. 1919....Ames, Iowa
Instructor in Animal Husbandry, Iowa State College

SOLOMON ALEXANDER VEST....B.S. 1900 (Chem.)....Mount Pleasant, Tenn.
B.Agr. 1901. Manager, The S. A. Vest Laboratory

SYLVESTER MURRAY VIELE....B.E. 1905....Altoona, Pa.
With Pennsylvania Railroad Co.

JOHN LAWRENCE VON GLAHN....B.E. 1908....Spartanburg, S. C.
Von Glahn & Talbott, Engineers-Contractors

EDWIN THOMAS WADSWORTH....B.E. 1911....Charlotte, N. C.
Member of Firm, Huntley Bros., Vulcanizers

JEW IRVIN WAGONER....B.S. 1919....R. 3, Durham, N. C.
Agricultural Supervisor, Lowe's Grove Farm-life School

Name	*Degree*	*Address*
ROSCOE MARVIN WAGSTAFF	B.E. 1900	Port Richmond, N. Y.
Chief Draftsman, Engineering Department, Staten Island Shipbuilding Co.		
JOSEPH KENDALL WAITT	B.E. 1904	Portsmouth, Va.
Assistant Valuation Engineer, Seaboard Air Line Railway		
SAMUEL STANHOPE WALKER	B.E. 1919	Martinsville, Va.
Overseer of Spinning and Assistant Superintendent, Martinsville Cotton Mill Company		
SUADE GOWER WALKER	B.S. 1918	R. 4, Rutherfordton, N. C.
Farmer		
WALTER JENNINGS WALKER	B.E. 1905	Schenectady, N. Y.
Electrical Engineer, General Electric Co.		
BENJAMIN FRANKLIN WALTON	B.S. 1894	R. 1, Raleigh, N. C.
Farmer		
CHARLES EMMETTE WALTON	B.E. 1910	Havana, Cuba
Vice President, Dodwells (Cuba) Ltd.		
SETH THOMAS WALTON	B.S. 1920	Columbus, Ohio
Student, Veterinary College of Ohio State University		
EDMUND FARRIS WARD	B.Agr. 1907	Smithfield, N. C.
Lawyer		
JAMES HUGH WARD, JR.	B.E. 1915	Rocky Mount, N. C.
Member of Firm, J. H. Ward Lumber Co.		
HUGH WARE	B.S. 1899	Kings Mountain, N. C.
Farmer		
JACOB OSBORNE WARE	B.S. 1916	Fayetteville, Ark.
In Charge of Cotton Investigations, Agricultural Experiment Station, University of Arkansas		
SYLVESTER HASSELL WARREN	B.S. 1920	Mocksville, N. C.
Demonstration Agent, Davie County		
CLARENCE WESTBROOK WARRICK	B.S. 1920	Moltonville, N. C.
Principal of Moltonville School		
HENRY CAPERTON WARWICK	B.E. 1918	Washington, D. C.
With U. S. Coast and Geodetic Survey		
JAMES HUNTER WATSON	B.S. 1911	Raleigh, N. C.
With R. E. Prince, Real Estate and Fire Insurance, Tucker Building		
ROBERT PHIFER WATSON	B.E. 1919	Salisbury, N. C.
With Rowan Cotton Mills (Second-hand Spinning)		
WALTER WELLINGTON WATT, JR.	B.E. 1905	Charlotte, N. C.
Machinery Salesman and Engineer, With Fred H. White		
JAMES WIGGINS WATTS, JR.	B.E. 1914	Williamston, N. C.
Exhibitor		
EDWARD HOWERTON WEATHERSPOON	B.E. 1914	New York, N. Y.
Sales Engineer, Chas. Cory & Son, Inc.		
CHARLES WRIGHT WEAVER	B.E. 1914	Charleston, S. C.
Superintendent Electric Department, C. C. Railway and Lighting Co.		
LINDSAY MARADE WEAVER	B.E. 1907	Not located this year
GEORGE HENDERSON WEBB	B.E. 1916	Covington, Va.
Civil Engineer, West Virginia Pulp and Paper Co.		
MARION EMERSON WEEKS	B.E. 1904	Seattle, Wash.
125 Warren Avenue		
CLEVELAND DOUGLAS WELCH	B.E. 1902	Cramerton, N. C.
Vice President and Agent, Mays Mills, Inc.		
EARL PARKS WELCH	B.S. 1920	Troy, N. C.
Instructor, Vocational Agriculture, Troy High School		
NATHANIEL WARREN WELDON	B.S. 1917	Stovall, N. C.
Principal, Stovall High School		
HOWARD WALDO WELLES	B.E. 1910	Philadelphia, Pa.
With Engineering Department, Commercial Truck Co.		
JOHN JACKSON WELLS	B.E. 1907	Rocky Mount, N. C.
C.E. 1916. Civil and Consulting Engineer		
ALBERT CLINTON WHARTON	B.S. 1904	Reynolda, N. C.
President and Manager, Reynolda, Inc.		

Name	*Degree*	*Address*
HARRY GRAVES WHARTON	B.S. 1916 Clerk, U. S. Postoffice	Greensboro, N. C.
DRUID EMMETT WHEELER	B.E. 1917 First Lieutenant, 54th Infantry, U. S. Regulars	Camp Grant, Ill.
FRED BARNETT WHEELER	B.E. 1912 M.E. 1915. With Miller Manufacturing Co.	Richmond, Va.
ALBERT LINWOOD WHITE, JR.	B.E. 1920 Draftsman, Newport News Shipbuilding and Dry Dock Co.	Hampton, Va.
BUXTON WHITE	B.S. 1915 Seed Merchant and Breeder	Elizabeth City, N. C.
DAVID LYNDON WHITE	B.Agr. 1907 Farmer	Trinity, N. C.
JONATHAN WINBORNE WHITE	B.S. 1903 M.S. 1912, University of Illinois. Professor of Soil Technology, Pennsylvania State College	State College, Pa.
PERCY STANLEY WHITE	B.S. 1918 With Experimental Feeding Laboratory, Research Division, U. S. Department of Agriculture	Indianapolis, Ind.
ROYALL EDWARD WHITE	B.E. 1908 Practicing Engineer	Aulander, N. C.
JOSEPH SLAUGHTER WHITEHURST	B.E. 1909 Assistant Cashier, Lake Wales State Bank	Lake Wales, Fla.
GEORGE WHITSON	B.E. 1916 Central Office Man, Southern Bell Telephone and Telegraph Co.	Florence, S. C.
LEVI ROMULUS WHITTED	B.S. 1896 C.E. 1897. Superintendent of Construction, U. S. Public Buildings, Treasury Department	Santa Fe, New Mexico
FREDERICK CARL WIGGINS	B.S. 1915 Manager, Waggener Paint and Glass Co.	Wichita, Kansas
ARCHIE CARRAWAY WILKINSON	B.E. 1905 Senior Engineer, I. C. C. Valuation Bureau	Chattanooga, Tenn.
BELTON CUNDIFF WILLIAMS	B.S. 1919 Assistant Chemist, State Department of Agriculture	Raleigh, N. C.
CHARLES BURGESS WILLIAMS	B.S. 1893 M.S. 1896. Vice Director and Chief of Division of Agronomy, N. C. Agricultural Experiment Station. Dean of Agriculture, State College	Raleigh, N. C.
CLAUDE B. WILLIAMS	B.S. 1899 Physician	Elizabeth City, N. C.
HENRY LLOYD WILLIAMS	B.S. 1896 General Manager of Mills, Cofield Manufacturing Co.	Cofield, N. C.
JAMES HARLEY WILLIAMS	B.E. 1906 B.A.S. 1910. General Secretary, Y. M. C. A.	Ware Shoals, S. C.
JOHN C. WILLIAMS	B.E. 1908 Chief Draftsman, Seaboard Air Line Railway	Norfolk, Va.
JOHN FRANCIS WILLIAMS	B.S. 1917 Ind. Alcohol and Chem. Division, Bureau of Internal Revenue	Washington, D. C.
JOHN FRANKLIN WILLIAMS	B.E. 1916 With Southern Power Co.	Charlotte, N. C.
JOHN RODMAN WILLIAMS	B.E. 1915 Pastor of Burkeville Presbyterian Church	Burkeville, Va.
PETER MCK. WILLIAMS, JR.	B.S. 1916 M.S. 1917. Farmer	Fayetteville, N. C.
ROY LEE WILLIAMSON	B.E. 1917 Resident Engineer, N. C. State Highway Commission	Weldon, N. C.
ALVIN CHESLEY WILSON	B.E. 1913 Operating Electrical Engineer, Pennsylvania Water and Power Co.	Baltimore, Md.
ARTHUR JOHN WILSON	B.S. 1907 M.S. 1908; Ph.D. 1911, Cornell. Professor of Chemistry, Wabash College	Crawfordsville, Ind.
JOHN MCCAMY WILSON	B.E. 1894	Not located this year
JOHN SPICER WILSON	B.E. 1909 Electrical Engineer, United States Government	New Orleans, La.

Name	*Degree*	*Address*
WALTER BOOKER WINFREE	B.S. 1911	R. 2, Wadesboro, N. C.
Farmer		
EDWARD LEIGH WINSLOW	B.E. 1910	Truxillo, Honduras
Contractor and Engineer		
HERMAN ELTON WINSTON	B.E. 1916	Rocky Mount, N. C.
With Rocky Mount Ball Club		
LEWIS TAYLOR WINSTON	B.Agr. 1906	Big Stone Gap, Va.
Chief Clerk, Auditing Department, Stonega Coke and Coal Co., Inc.		
THOMAS HUTCHINSON WINSTON	B.E. 1914	Philadelphia, Pa.
District Superintendent of Traffic, Bell Telephone Co. of Pennsylvania		
HOWARD WISWALL, JR.	B.E. 1895	Asheville, N. C.
Civil Engineer and Timber Man		
JAMES HARVEY WITHERS, JR.	B.S. 1916	R. 1, Broadway, N. C.
Farmer		
HENRY KOLLOCK WITHERSPOON	B.E. 1915	Raleigh, N. C.
Project Engineer, State Highway Commission		
PAUL ADAMS WITHERSPOON	B.E. 1909	Pittsburgh, Pa.
C.E. 1911, Lehigh University. Assistant Engineer, Carnegie Coal Co.		
LOUIS ERNEST WOOTEN	B.E. 1917	Raleigh, N. C.
Instructor in Civil Engineering, N. C. State College		
DANIEL BARNES WORTH	B.E. 1920	Raleigh, N. C.
Instructor in Mechanical Engineering Department, N. C. State College		
OWEN ZELOTES WRENN	B.E. 1914	Charlotte, N. C.
Southern Engineering Co.		
BENJAMIN VAIDEN WRIGHT	B.E. 1901	Laurel, Miss.
With Gilchrist-Fordney Lumber Co.		
SAMUEL KING WRIGHT	B.E. 1920	Elizabeth City, N. C.
Teacher, Elizabeth City High School		
MARION FULLER WYATT	B.E. 1911	Raleigh, N. C.
With Job P. Wyatt & Sons Co.		
ROBERT JOB WYATT	B.E. 1909	Raleigh, N. C.
Treasurer, Job P. Wyatt & Sons Co.		
FORREST EGAN WYSONG	B.E. 1915	New York, N. Y.
President, Cable Cord Corporation		
CHARLES GARRETT YARBOROUGH	B.E. 1895	Los Angeles, Cal.
District Service Manager, Westinghouse Electric and Manufacturing Co.		
LOUIS THOMAS YARBOROUGH	B.E. 1893	Raleigh, N. C.
Postoffice Inspector, Headquarters, Washington, D. C.		
WOODFIN BRADSHER YARBOROUGH	B.E. 1908	Morenci, Ariz.
Chief Electrician, Phelps-Dodge Corporation, Morenci Branch		
JAMES FULLER YATES	B.E. 1918	Elyria, Ohio
Estimating Engineer, Lorain County Electric Co.		
HARRY CURTIS YOUNG	M.S. 1915	East Lansing, Mich.
Research Associate in Botany, Michigan Agricultural College		
ROBERT CLEVELAND YOUNG	B.E. 1920	Raleigh, N. C.
Bureau of Crop Estimates, N. C. Department of Agriculture		
SAMUEL MARVIN YOUNG	B.E. 1893	Wilson, N. C.
Traveling Salesman, Watkins-Cottrell Co., Richmond, Va.		
THOMAS GRADY YOUNG	B.E. 1920	Raleigh, N. C.
Graduate Student, North Carolina State College		
YARO ZENISHEK	B.E. 1917	New York, N. Y.
100 East 29th Street		
JOHN FRANKLIN ZIGLAR	B.E. 1908	Winston-Salem, N. C.
C.E. 1915. Hinshaw & Ziglar, Civil Engineers		

DECEASED GRADUATES

Thomas Martin Ashe	B.E.	1895
Edward Par Bailey	B.E.	1904
John Isham Blount	B.E.	1895
Henry Emil Bonitz	B.E.	1893
Joel W. Bullock	B.Agr.	1905
Robert Hill Carter	B.E.	1907
Summey Crouse Cornwell	B.E.	1903
William Pescud Craig	B.S.	1901
Edwin Speight Darden	B.S.	1895
George Maslin Davis	B.E.	1901
William Kearney Davis	B.E.	1895
Jacob Tatum Eaton	B.Agr.	1907
John Daniel Ferguson	B.E.	1903
Nevin Gould Fetzer	B.S.	1912
Hugh Pierce Foster	B.E.	1903
Francis Marion Foy	B.S.	1899
Charles Duffy Francks	B.E.	1893
Ransom Eaton Gill	B.E.	1910
Roy Joseph Gill	B.E.	1907
John Howard Glenn	B.E.	1903
Emil Gunter	B.E.	1903
Samuel Merrill Hanff	B.S.	1900
George Rom. Hardesty	B.E.	1907
Thomas Frederick Haywood	B.E.	1909
Robert Irving Howard	B.E.	1902
Arthur Templeton Kenyon	B.E.	1905
James Heritage Koonce	B.E.	1905
Joe Poindexter Lovill	B.E.	1906
James William McKoy	B.E.	1893
Robert Lee Morgan	B.E.	1910
Frank Bullock Morton	B.E.	1914
B. Moore Parker	B.S.	1898
Alexander Holladay Pickell,	B.E.	1912
Hugh Williams Primrose	B.S.	1897
Zebbie George Rogers	B.E.	1894
Carl DeWitt Sellars	B.E.	1893
Charles Edgar Seymore	B.S.	1893
William Thomas Shaw, Jr.	B.E.	1914
Orin Morrow Sigmon	B.E.	1911
Charlie Augustine Speas	B.E.	1911
John Francis Speight	B.E.	1910
Hugh Stuart Steele	B.E.	1909
William Anderson Syme	B.S.	1899
Zebulon Whitehurst Taylor,	B.E.	1914
Frank Martin Thompson	B.E.	1910
Buxton Williams Thorne	B.E.	1893
Charles Edward Trotter	B.S.	1903
Reid Tull	B.E.	1906
Clyde Loreine Vann	B.E.	1914
Steven Dockery Wall	B.E.	1905
Charles Augustus Watson	B.S.	1901
Jordan Lea Watson	B.S.	1897
Will Miller Watson	B.E.	1915
James Thaddeus Weatherly	B.S.	1918
Cecil Bernard Whitehurst	B.E.	1907
Edwin Seymour Whiting	B.E.	1903
Gaither Hall Whiting	B.S.	1900
Bradley Jewett Wooten	B.S.	1897

Name D....

WALTER BOOKER WINFREE.....

EDWARD LEIGH WINSLOW.....B.E. 1910.....Truxillo, Honduras
Contractor and Engineer

HERMAN ELTON WINSTON.....B.E. 1916.....Rocky Mount, N. C.
With Rocky Mount Ball Club

LEWIS TAYLOR WINSTON.....B.Agr. 1906.....Big Stone Gap, Va.
Chief Clerk, Auditing Department, Stonega Coke and Coal Co., Inc.

THOMAS HUTCHINSON WINSTON.....B.E. 1914.....Philadelphia, Pa.
District Superintendent of Traffic, Bell Telephone Co. of Pennsylvania

HOWARD WISWALL, JR.....B.E. 1895.....Asheville, N. C.
Civil Engineer and Timber Man

JAMES HARVEY WITHERS, JR.....B.S. 1916.....R. 1, Broadway, N. C.
Farmer

HENRY KOLLOCK WITHERSPOON.....B.E. 1915.....Raleigh, N. C.
Project Engineer, State Highway Commission

PAUL ADAMS WITHERSPOON.....B.E. 1909.....Pittsburgh, Pa.
C.E. 1911, Lehigh University. Assistant Engineer, Carnegie Coal Co.

LOUIS ERNEST WOOTEN.....B.E. 1917.....Raleigh, N. C.
Instructor in Civil Engineering, N. C. State College

DANIEL BARNES WORTH.....B.E. 1920.....Raleigh, N. C.
Instructor in Mechanical Engineering Department, N. C. State College

OWEN ZELOTES WRENN.....B.E. 1914.....Charlotte, N. C.
Southern Engineering Co.

BENJAMIN VAIDEN WRIGHT.....B.E. 1901.....Laurel, Miss.
With Gilchrist-Fordney Lumber Co.

SAMUEL KING WRIGHT.....B.E. 1920.....Elizabeth City, N. C.
Teacher, Elizabeth City High School

MARION FULLER WYATT.....B.E. 1911.....Raleigh, N. C.
With Job P. Wyatt & Sons Co.

ROBERT JOB WYATT.....B.E. 1909.....Raleigh, N. C.
Treasurer, Job P. Wyatt & Sons Co.

FORREST EGAN WYSONG.....B.E. 1915.....New York, N. Y.
President, Cable Cord Corporation

CHARLES GARRETT YARBOROUGH.....B.E. 1895.....Los Angeles, Cal.
District Service Manager, Westinghouse Electric and Manufacturing Co.

LOUIS THOMAS YARBOROUGH.....B.E. 1893.....Raleigh, N. C.
Postoffice Inspector, Headquarters, Washington, D. C.

WOODFIN BRADSHER YARBOROUGH.....B.E. 1908.....Morenci, Ariz.
Chief Electrician, Phelps-Dodge Corporation, Morenci Branch

JAMES FULLER YATES.....B.E. 1918.....Elyria, Ohio
Estimating Engineer, Lorain County Electric Co.

HARRY CURTIS YOUNG.....M.S. 1915.....East Lansing, Mich.
Research Associate in Botany, Michigan Agricultural College

ROBERT CLEVELAND YOUNG.....B.E. 1920.....Raleigh, N. C.
Bureau of Crop Estimates, N. C. Department of Agriculture

SAMUEL MARVIN YOUNG.....B.E. 1893.....Wilson, N. C.
Traveling Salesman, Watkins-Cottrell Co., Richmond, Va.

THOMAS GRADY YOUNG.....B.E. 1920.....Raleigh, N. C.
Graduate Student, North Carolina State College

YARO ZENISHEK .....B.E. 1917.....New York, N. Y.
100 East 29th Street

JOHN FRANKLIN ZIGLAR.....B.E. 1908.....Winston-Salem, N. C.
C.E. 1915. Hinshaw & Ziglar, Civil Engineers

ELECTRICAL ENGINEERING. 303-304

Thomas Martin Ashe....B.E. 1895
Edward Par Bailey....B.E. 1904
John Isham Blount....B.E. 1895
Henry Emil Bonitz....B.E. 1893
Joel W. Bullock....B.Agr. 1905
Robert Hill Carter....B.E. 1907
Summey Crouse Cornwell....B.E. 1903
William Pescud Craig....B.S. 1901
Edwin Speight Darden....B.S. 1895
George Maslin Davis....B.E. 1901
William Kearney Davis....B.E. 1895
Jacob Tatum Eaton....B.Agr. 1907
John Daniel Ferguson....B.E. 1903
Nevin Gould Fetzer....B.S. 1912
Hugh Pierce Foster....B.E. 1903
Francis Marion Foy....B.S. 1899
Charles Duffy Francks....B.E. 1893
Ransom Eaton Gill....B.E. 1910
Roy Joseph Gill....B.E. 1907
John Howard Glenn....B.E. 1903
Emil Gunter....B.E. 1903
Samuel Merrill Hanff....B.S. 1900
George Rom. Hardesty....B.E. 1907
Thomas Frederick Haywood....B.E. 1909
Robert Irving Howard....B.E. 1902
Arthur Templeton Kenyon....B.E. 1905
James Heritage Koonce....B.E. 1905
Joe Poindexter Lovill....B.E. 1906
James William McKoy....B.E. 1893
Robert Lee Morgan....B.E. 1910
Frank Bullock Morton....B.E. 1914
B. Moore Parker....B.S. 1898
Alexander Holladay Pickell, B.E. 1912
Hugh Williams Primrose....B.S. 1897
Zebbie George Rogers....B.E. 1894
Carl DeWitt Sellars....B.E. 1893
Charles Edgar Seymore....B.S. 1893
William Thomas Shaw, Jr....B.E. 1914
Orin Morrow Sigmon....B.E. 1911
Charlie Augustine Speas....B.E. 1911
John Francis Speight....B.E. 1910
Hugh Stuart Steele....B.E. 1909
William Anderson Syme....B.S. 1899
Zebulon Whitehurst Taylor, B.E. 1914
Frank Martin Thompson....B.E. 1910
Buxton Williams Thorne....B.E. 1893
Charles Edward Trotter....B.S. 1903
Reid Tull....B.E. 1906
Clyde Loreine Vann....B.E. 1914
Steven Dockery Wall....B.E. 1905
Charles Augustus Watson....B.S. 1901
Jordan Lea Watson....B.S. 1897
Will Miller Watson....B.E. 1915
James Thaddeus Weatherly....B.S. 1918
Cecil Bernard Whitehurst....B.E. 1907
Edwin Seymour Whiting....B.E. 1903
Gaither Hall Whiting....B.S. 1900
Bradley Jewett Wooten....B.S. 1897

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CATALOG

STATE COLLEGE RECORD

VOL. 20 No. 11

FEB 11 1926

APRIL, 1922

RALEIGH, N. C.

BLISHED MONTHLY BY THE NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING

Entered as second class matter October 16, 1917, at the postoffice at Raleigh, C., under the Act of August 24, 1912.

NORTH CAROLINA STATE COLLEGE
OF
AGRICULTURE AND ENGINEERING

1921-1922

STATE COLLEGE STATION
RALEIGH

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COLLEGE CALENDAR

1922

Tuesday, June 13.....Summer School begins.
Wednesday, July 26.....Summer School ends.
Tuesday, September 5.....Fall Term begins. Registration days, Tuesday and Wednesday, September 5 and 6.
Thursday and Friday, October 19 and 20.....Fair Week holidays.
Saturday, November 11.....Armistice day.
Thursday, November 30.....Thanksgiving day.
Wednesday, December 20.....First Term ends.

1923

Wednesday, January 3.....Second Term begins. Registration days, Wednesday and Thursday, January 3 and 4.
Friday to Tuesday, March 30 to April 3, inclusive.....Easter vacation.
Tuesday, May 29.....Commencement day.

CALENDAR

1922

JANUARY

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1923

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Name	*Postoffice*	*Term Expires*
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T. T. BALLENGER	Tryon	March 20, 1923
W. H. WILLIAMSON	Raleigh	March 20, 1923
O. L. CLARK	Clarkton	March 20, 1923
W. R. BONSAL	Hamlet	March 20, 1925
D. R. NOLAND	Crabtree	March 20, 1925
CLAUDE B. WILLIAMS	Elizabeth City	March 20, 1925
CLARENCE POE, Chairman	Raleigh	March 20, 1925
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T. E. VANN	Como	March 20, 1927
P. S. BOYD	Mooresville	March 20, 1927
W. S. LEE	Charlotte	April 1, 1929
C. F. TOMLINSON	High Point	April 1, 1929
J. F. DIGGS	Rockingham	April 1, 1929
E. R. JOHNSON	Currituck	April 1, 1929

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P. S. BOYD

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Vice President and Professor of Chemistry

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Lieutenant Colonel, U. S. A., Retired

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B.S. in Agr. Eng. 1916, Mississippi Agricultural and Mechanical College

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A.B. 1917, Wake Forest College

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B.S. in Economics 1921, University of Pennsylvania

LESLIE ELLSWORTH LANE
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ALEXANDER CAMPBELL MARTIN
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A.B. 1920, Oberlin College

HARRISON AUGUSTUS MARTIN
Instructor in Mechanical Drawing
E.E. 1920, University of Virginia

JULIAN CREIGHTON MILLER
Instructor in Horticulture
B.S. 1921, Clemson Agricultural College

ROBERT JAMES PEARSALL
Instructor in Electrical Engineering
B.E. 1920, N. C. State College of Agriculture and Engineering

GEORGE WALTER PRICE
Instructor in Forge

CARLETON RUTLEDGE
Instructor in Poultry Science

MARION FRANCIS TRICE
Instructor in Chemistry
B.S. 1920, N. C. State College of Agriculture and Engineering

PERCY HOCUTT WILSON
Instructor in Modern Languages
A.B. 1920, Wake Forest College

CARLE CLARK ZIMMERMAN
Instructor in Rural Life
A.B. 1920, University of Missouri; M.S. 1921, N. C. State College of Agriculture and Engineering

MRS. CHARLES MCKIMMON
State Demonstration Agent; Assistant in Agricultural Extension

OFFICERS

Edwin Bentley Owen, B.S.
Registrar

Arthur Finn Bowen, C.P.A.
Treasurer and Purchasing Agent

Talmage Holt Stafford, B.S.
Alumni Secretary

Edward S. King, A.B.
General Secretary of the Young Men's Christian Association

Harry Hartsell, B.E.
Director of Athletics

Alton Cook Campbell, M.D.
Physician

Louis Hines Harris
Steward

Mrs. Ella I. Harris
Hospital Matron

Mrs. Charlotte M. Williamson
Librarian

Mrs. Nellie Williamson Price
Dietitian

Miss Isabel Bronson Busbee
Secretary to the President

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RESERVE OFFICERS TRAINING CORPS

Daniel Dixon Gregory, Lieutenant Colonel, Retired, U. S. A., Professor of Military Science and Tactics.
John English Haywood, Captain Infantry, D. O. L., U. S. A., Assistant.
Harry Elmer Fischer, Captain Infantry, D. O. L., U. S. A., Assistant.
Nathaniel Lewis Simmonds, Captain Infantry, D. O. L., U. S. A., Assistant.
Robert Edward Wysor, Jr., Captain Infantry, D. O. L., U. S. A., Assistant.
Lester Austin Webb, Captain Infantry, D. O. L., U. S. A., Assistant.
Horace Carter Thomas, Staff Sergeant, D. E. M. L., U. S. A., Instructor.
Jacob Elverson Baker, Sergeant, D. E. M. L., U. S. A., Instructor.
Albert Porter Hammond, Sergeant, D. E. M. L., U. S. A., Instructor.

FARM DEMONSTRATION AGENTS

C. R. Hudson, State Agent, Raleigh, N. C.
H. H. B. Mask, Assistant State Agent, Raleigh, N. C.

DISTRICT AGENTS

J. M. Gray, Mountain District, Asheville, N. C.
E. S. Millsaps, Piedmont District, Statesville, N. C.
T. D. McLean, Central District, Aberdeen, N. C.
E. W. Gaither, Eastern District, Goldsboro, N. C.
O. F. McCrary, Northeastern District, Washington, N. C.

COUNTY AGENTS

County	*Name*	*Postoffice*
Alamance	W. Kerr Scott	Haw River
Alexander	U. A. Miller	Taylorsville
Anson	J. W. Cameron	Polkton
Avery	J. W. Goodman, Jr.	Newland
Beaufort	B. T. Leppard	Washington
Bladen	R. K. Craven	Clarkton
Brunswick	J. E. Dodson	Supply
Buncombe	C. C. Proffitt	Asheville
Cabarrus	R. D. Goodman	Concord
Caldwell	D. W. Roberts	Lenoir
Caswell	J. L. Dove	Yanceyville
Catawba	J. W. Hendricks	Newton
Chowan	N. K. Rowell	Edenton
Cleveland	R. E. Lawrence	Shelby
Columbus	J. T. Lazar	Whiteville
Cumberland	F. W. Risher	Fayetteville
Craven	J. G. Lawton	New Bern
Currituck	J. E. Chandler	Currituck
Davidson	G. B. Blum	Lexington
Duplin	L. L. McLendon	Kenansville
Durham	O. H. Stanard	Durham
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Forsyth	R. W. Pou	Winston-Salem
Gaston	C. L. Gowan	Gastonia
Greene	A. M. Dickson	Snow Hill
Guilford	E. B. Garrett	Greensboro
Hertford	H. L. Miller	Winton
Iredell	R. W. Graeber	Statesville
Jackson	R. W. Gray	Sylva
Johnston	S. J. Kirby	Smithfield
Jones	E. F. Fletcher	Trenton
Lenoir	C. M. Brickhouse	Kinston

County	*Name*	*Postoffice*
Lincoln	J. G. Morrison	Lincolnton
Mecklenburg	Kope Elias	Charlotte
Montgomery	A. R. Morrow	Troy
Moore	M. W. Wall	Carthage
Nash	G. D. Burroughs	Nashville
New Hanover	J. P. Herring	Wilmington
Onslow	D. L. Latham	Jacksonville
Pasquotank	G. W. Fall	Elizabeth City
Pender	W. L. Smarr	Burgaw
Perquimans	L. W. Anderson	Hertford
Pitt	W. B. Pace	Greenville
Polk	J. R. Sams	Columbus
Richmond	W. H. Barton	Rockingham
Robeson	O. O. Dukes	Lumberton
Rockingham	F. S. Walker	Reidsville
Rowan	W. G. Yeager	Salisbury
Rutherford	L. D. Thrash	Rutherfordton
Sampson	R. T. Melvin	Clinton
Scotland	C. L. Newman	Laurinburg
Stanly	O. H. Phillips	Albemarle
Swain	Frank Fleming	Bryson City
Transylvania	J. W. Lindley	Brevard
Union	T. J. W. Broom	Monroe
Vance	J. C. Anthony	Henderson
Wake	John C. Anderson	Raleigh
Washington	R. W. Johnston	Plymouth
Wayne	A. K. Robertson	Goldsboro
Wilkes	A. G. Hendren	Straw
Wilson	B. T. Ferguson	Wilson
Yadkin	D. H. Osborne	Yadkinville

LOCAL AGENTS

J. A. Colson, Ansonville; Anson County.
W. D. Brown, Winton; Hertford County.
Oliver Carter, Parmele; Pitt, Edgecombe, and Martin counties.
D. D. Dupree, Farmville; Greene County.
G. W. Herring, Clinton; Sampson County.
R. J. Johnson, Warsaw; Duplin County.
E. C. Lackey, Winston-Salem; Forsyth, Davie, and Yadkin counties.
C. S. Mitchell, Gatesville; Gates County
J. W. Mitchell, Vineland; Columbus and Bladen counties.
T. B. Patterson, Salisbury; Rowan County.
H. E. Webb, Greensboro; Guilford, Rockingham, and Alamance counties.
L. H. Roberts, Raleigh; Wake County.
J. D. Wray, Farm Makers' Club Agent, Greensboro, N. C. (Assistant in Charge, Negro Boys' Club Work.)

OFFICERS AND STAFF OF THE N. C. AGRICULTURAL EXPERIMENT STATION AND THE N. C. AGRICULTURAL EXTENSION SERVICE

W. C. Riddick ..... President of the College
W. A. Graham ..... Commissioner of Agriculture
B. W. Kilgore ..... Director
C. B. Williams ..... Vice Director, Station Agronomist
J. M. Gray ..... Assistant Director
A. F. Bowen ..... Treasurer and Purchasing Agent
H. C. Evans ..... Auditor and Executive Assistant
R. W. Green ..... Agricultural Editor
W. F. Pate ..... Agronomist in Soils
E. C. Blair ..... Assistant Agronomist
S. K. Jackson ..... Assistant Agronomist in Soils
R. Y. Winters ..... Plant Breeding
S. W. Hill ..... Assistant in Plant Breeding
P. H. Kime[3] ..... Assistant in Plant Breeding
G. M. Garren ..... Assistant in Plant Breeding
S. F. Davidson ..... Assistant in Soil Survey
W. A. Davis ..... Assistant in Soil Survey
W. D. Lee ..... Assistant in Soil Survey
A. R. Russell ..... Assistant in Field Experiments
E. H. Mathewson[3] ..... Tobacco Expert
W. G. Haywood ..... Fertilizer Chemist
E. S. Dewar ..... Assistant Chemist
B. C. Williams ..... Assistant Chemist
G. L. Arthur ..... Assistant Chemist
M. R. Stephenson ..... Assistant Chemist
L. M. Nixon ..... Assistant Chemist
Z. B. Bradford ..... Assistant Chemist
F. W. Sherwood ..... Assistant Chemist
J. O. Halverson ..... Feed and Animal Nutrition Chemist
Franklin Sherman, Jr. ..... Entomologist
Z. P. Metcalf ..... Entomologist
R. W. Leiby ..... Assistant Entomologist
T. B. Mitchell ..... Assistant Entomologist
C. L. Sams[6] ..... Beekeeping
W. B. Mabee ..... Extension Entomologist
C. D. Matthews ..... Horticulturist
J. P. Pillsbury ..... Horticulturist
L. H. Nelson ..... Assistant Horticulturist
J. M. Dyer ..... Assistant Horticulturist

———————— Animal Industry
R. S. Curtis Associate in Animal Industry
Stanley Combs Dairy Experimenter
B. F. Kaupp Poultry Investigator and Pathologist
J. A. Arey[2] Dairy Farming
A. G. Oliver[2] Poultry Extension
John E. Ivey Assistant Poultry Investigator and Pathologist
E. G. Wardin Assistant Poultry Investigator and Pathologist
F. R. Farnham[2] Assistant in Dairy Farming
A. C. Kimrey Assistant in Dairy Farming
F. T. Peden Assistant in Beef Cattle
Earl Hostetler Assistant in Beef and Swine
W. W. Shay[2] Swine Extension
George Evans Sheep Extension
F. A. Wolf Plant Pathologist
———————— Extension Pathologist
S. G. Lehman Assistant in Bacteriology
F. O. Bartel[4] Drainage Engineer
B. F. Brown Chief, Division of Markets
Gorrell Shumaker Assistant in Marketing Fruits and Vegetables
P. H. Hart[5] Assistant in Cotton Grading and Marketing
F. E. Miller Assistant Director, in Charge Branch Stations
F. T. Meacham, Assistant Director, in Charge Piedmont Station, Iredell County, Statesville, N. C.
R. E. Currin, Jr., Assistant Director, in Charge Edgecombe Station, Edgecombe County, Rocky Mount, N. C.
E. G. Moss, Assistant Director, in Charge Tobacco Station, Granville County, Oxford, N. C.
Charles Dearing, Assistant Director, in Charge Coastal Plain Station, Pender County, Willard, N. C.
————, Assistant Director, in Charge Black Land Station, Wenona, N. C.
C. R. Hudson[1] State Agent
H. H. B. Mask[1] Assistant State Agent
E. S. Millsaps District Agent, Piedmont District
T. D. McLean District Agent, Central District
———————— District Agent, Mountain District
O. F. McCrary District Agent, Northeastern District
E. W. Gaither District Agent, Eastern District
Mrs. Jane S. McKimmon[1] State Home Demonstration Agent Raleigh
Miss Maude E. Wallace Assistant State Home Demonstration Agent Raleigh
Miss Mamie Sue Jones Tidewater District Agent Washington
Mrs. Estelle T. Smith Eastern District Agent Goldsboro
Mrs. Cornelia C. Morris Central District Agent Henderson

MISS MARTHA CREIGHTON....Piedmont District Agent.....Greensboro
MRS. MITTIE M. HENLEY....Special Agent.....Sanford
E. R. RANEY.....Farm Engineering

The Experiment Station and the Extension Service are supported and conducted jointly by the College and State Department of Agriculture. A joint committee from the Board of Trustees of the College and the Board of Agriculture, under agreement entered into by the Boards and authorized by an act of the Legislature in 1913, have direct charge of them.

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[1]In coöperation with the United States Department of Agriculture, States Relations Service.

[2]In coöperation with the United States Department of Agriculture, Bureau of Animal Industry.

[3]In coöperation with the United States Department of Agriculture, Bureau of Plant Industry.

[4]In coöperation with the United States Department of Agriculture, Office of Roads and Rural Engineering.

[5]In coöperation with the United States Department of Agriculture, Bureau of Markets and Rural Organizations.

[6]In coöperation with the United States Department of Agriculture, Bureau of Entomology.

MILITARY ORGANIZATION

PROFESSOR OF MILITARY SCIENCE AND TACTICS

Lieutenant Colonel Daniel D. Gregory, Retired, United States Army

ASSISTANTS

Captain John E. Haywood, United States Army
Captain Harry E. Fischer, United States Army
Captain Nathaniel L. Simmonds, United States Army
Captain Robert E. Wysor, Jr., United States Army
Captain Lester A. Webb, United States Army

INSTRUCTORS

Staff Sergeant Horace C. Thomas, United States Army
Sergeant Jacob E. Baker, United States Army
Sergeant Albert P. Hammond, United States Army

R. O. T. C. REGIMENT

Regimental Staff Officers

Robert M. Stikeleather, Lieutenant Colonel
Averette G. Floyd, Captain, R. 1
Henry S. Hill, Captain, R. 2
Luther W. Greene, Captain, R. 3
Luther J. Jordan, Captain, R. 4

Battalion Staff Officers

Watson O. Powell, Major, 1st Battalion
Wesley I. Pickens, Major, 2d Battalion
Benton W. Williams, Major, 3d Battalion
George T. Parker, 1st Lieutenant, Bn. 3, 1st Battalion
William L. Steele, 1st Lieutenant, Bn. 3, 2d Battalion
William H. Browne, III, 1st Lieutenant, Bn. 3, 3d Battalion

Staff Noncommissioned Officers

William L. West, Jr., Master Sergeant
Wilburn C. John, Color Sergeant
David B. Vansant, Color Sergeant
Lucian J. Dale, Sergeant Bugler

Demonstration Platoon

Alexander H. Veazey, Captain
Garnet L. Booker, 1st Lieutenant
Walter D. Hampton, 1st Lieutenant
Calvin W. Pegram, 2d Lieutenant
David R. Wright, 2d Lieutenant
C. R. Barber, 1st Sergeant

BAND

P. W. Price, Captain, Band Leader
Carl Taylor, Captain
Edward D. Barr, 1st Lieutenant
Lera R. Harrill, 1st Lieutenant
Ralph F. Matthews, 2d Lieutenant
William W. Starr, 2d Lieutenant
William F. Armstrong, 2d Lieutenant
Everett T. Kearns, 1st Sergeant
B. F. Norris, Jr., Sergeant
J. S. Ware, Sergeant
F. K. Baker, Corporal
W. T. Price, Corporal

COMPANY "A"

George B. Cherry, Captain
Paul K. Ewell, 1st Lieutenant
Flave H. Corpening, 2d Lieutenant
George T. Bostic, 1st Sergeant
T. F. Bostian, Sergeant
J. E. Teague, Sergeant
R. A. Musgrove, Sergeant
M. L. Tatum, Sergeant
J. B. Cornwell, Corporal
M. E. King, Corporal
T. A. White, Corporal
J. S. Skeen, Corporal
C. E. Dedmon, Corporal
J. A. Stradley, Corporal

COMPANY "B"

Alex. C. Hamrick, Captain
Henry D. Green, 1st Lieutenant
Leonidas R. LeGwin, 2d Lieutenant
Charles H. Warren, 1st Sergeant
J. M. Brown, Sergeant
B. E. Lancaster, Sergeant
C. W. Norman, Sergeant
W. W. Rankin, Sergeant
S. C. Dougherty, Corporal
D. F. Duncan, Corporal
E. M. Furlough, Corporal
J. W. Johnson, Corporal
J. A. Rickards, Corporal
W. J. Russell, Corporal

COMPANY "C"

William N. Hicks, Captain
Emory G. Singletary, 1st Lieutenant
Earl R. Betts, 2d Lieutenant
R. H. Broom, 1st Sergeant
J. K. Blum, Sergeant
W. T. Burgin, Sergeant
G. G. Farrington, Sergeant
J. L. Shuping, Sergeant
L. W. Barrette, Corporal
M. H. Braswell, Corporal
R. L. Carpenter, Corporal
H. D. Hamrick, Corporal
W. N. Hipp, Corporal
C. L. Hall, Corporal

COMPANY "D"

Sidney F. Mauney, Jr., Captain
William T. Harding, Jr., 1st Lieutenant
Friel T. Vance, 2d Lieutenant
W. D. Stockton, 1st Sergeant
E. W. Moore, Sergeant
D. E. Stewart, Sergeant
E. A. Jones, Corporal
S. G. Newlin, Corporal
J. D. Henry, Corporal
G. S. Hobson, Corporal
B. Jenkins, Corporal
H. E. Stout, Corporal

COMPANY "E"

Charles O. Butler, Captain
Henry M. Shaw, Jr., 1st Lieutenant
Thomas G. Moody, 2d Lieutenant
W. D. Yarboro, 1st Sergeant
G. H. Lineberry, Sergeant
J. B. Stepp, Sergeant
A. M. Fountain, Corporal
J. C. Harwell, Corporal
A. M. Joyner, Corporal
S. C. Pharr, Corporal
H. H. Tate, Corporal
R. W. Wallace, Corporal

COMPANY "F"

Doyle L. Cannon, Captain
Heath O. Kennette, 1st Lieutenant
Harold H. Bangs, 2d Lieutenant
T. E. Wray, 1st Sergeant
L. S. Crisp, Sergeant
Z. M. Harry, Sergeant
J. L. Higgins, Corporal
J. S. Whitener, Corporal
F. B. Looper, Corporal
T. P. Richardson, Corporal
W. A. Spicer, Corporal
J. Butler, Corporal

COMPANY "G"

Henry H. Weaver, Captain
Clinton A. Cilley, 1st Lieutenant
William A. Stillwell, 2d Lieutenant
S. E. Wilson, 1st Sergeant
A. S. Gay, Sergeant
J. F. Ferguson, Sergeant
R. E. Smith, Sergeant
M. P. Thomas, Sergeant
W. H. Barnhardt, Corporal
W. J. Barber, Corporal
J. M. Harris, Corporal
R. W. Cline, Corporal
C. M. White, Corporal
J. K. Wells, Corporal
C. B. Williams, Corporal

COMPANY "H"

Edward W. Ruggles, Captain
Andrew J. Corpening, 1st Lieutenant
William O. Crary, 2d Lieutenant
T. L. Stallings, 1st Sergeant
J. F. Baum, Sergeant
E. R. Commander, Sergeant
J. P. Tayloe, Sergeant
R. W. Underwood, Sergeant
W. C. Mock, Corporal
C. C. Parker, Corporal
W. H. Jennings, Corporal
E. F. Graham, Corporal
R. B. Keys, Corporal
M. D. Clark, Corporal

COMPANY "I"

Olin L. Bradshaw, Captain
Albert M. Worth, 1st Lieutenant
Clyde D. Buchanan, 2d Lieutenant
W. R. Anderson, 1st Sergeant
C. S. Leigh, Sergeant
W. H. Strong, Sergeant
D. P. Greer, Corporal
C. J. Rich, Corporal
I. A. Clay, Corporal
F. W. Kittrell, Corporal
W. M. Bethune, Corporal
F. S. Trantham, Corporal

GENERAL INFORMATION

During the years in which North Carolina was emerging from the economic havoc wrought by Civil War and Reconstruction, some farsighted men began to see the necessity of rearing industrially equipped men. They felt keenly the need of competent men to build and direct new industries, and to restore the fertility of the land. They recognized that men capable of doing what was needed would have to be educated in industrial schools and technical colleges.

The first organized body to take steps for the establishment of a State industrial institution in North Carolina was the Watauga Club. This club, composed of progressive young men, explained its mission by declaring that it was "an association in the city of Raleigh designed to find out and make known information on practical subjects that will be of public use." In 1885 this club presented to the Legislature a memorial urging that body "to establish an industrial school in North Carolina which shall be a training place for young men who wish to acquire skill in the wealth-producing arts and sciences."

This memorial quickened general interest in the proposed school, and several bills looking to its foundation were introduced in the Legislature of 1885. On March 7th, one of these bills, introduced by Hon. Augustus Leazar of Iredell County, became a law. This law provided that the Board of Agriculture should seek proposals from the cities and towns of the State, and that the school should be placed in the town offering the greatest inducements. The Board of Agriculture finally accepted an offer from the city of Raleigh.

Meantime, the ideas of the advocates of the school had been somewhat broadened as to the character of the proposed institution.

These men saw that Congress was about to supplement the original land grant by an additional appropriation for agricultural and mechanical colleges in each State. The originators of the conception then sought the aid of progressive farmers in order to change the school into an agricultural and mechanical college. Colonel L. L. Polk, the editor of the newly-established **Progressive Farmer,** threw the weight of his paper heartily into the idea. Meetings were held in various places, and two very large meetings in Raleigh considered the proposition. As a result, the school already provided for was by action of the Legislature of 1887 changed into an agricultural and mechanical college, and the Congressional Land Scrip Fund was given the newly formed institution. In addition, the law directed that any surplus from the

Department of Agriculture should go into the treasury of the College. Mr. R. Stanhope Pullen, one of Raleigh's most broad-minded citizens, gave the institution eighty-three acres of land in a beautiful suburb of Raleigh. Additional funds were afterwards provided by the Supplemental Morrill Bill passed by Congress in 1890, by the Nelson Bill of 1907, and by State appropriations. The first building was completed in 1889, and the doors of the College were opened for students in October, 1889. Seventy-two students, representing thirty-seven counties, were enrolled the first year. The faculty consisted of six professors and two assistants. From this small beginning in 1889 the College has grown steadily from year to year.

The College is beautifully located on the extension of Hillsboro street in the western part of Raleigh, a mile and a quarter from the State Capitol. The site is suitable in all respects.

There is an abundant supply of water from the city mains and from twelve deep wells on the College grounds. The water is analyzed, both chemically and bacteriologically, at regular periods. The College now owns four hundred and eighty-six acres of land. Fifteen hundred young trees and nine hundred and forty vines are growing in an orchard of twenty-five acres. Seven acres are devoted to truck growing. The campus consists of about thirty acres of rolling land, which is being improved as rapidly as circumstances permit.

BUILDINGS

The College has the following buildings, all of which are well lighted, heated, and ventilated, and adequately protected against fire:

Holladay Hall, the administration building, 170 feet long by 64 feet deep, is a three-story brick structure with a basement. The basement floor is devoted to the classrooms and laboratories of the Physics Department. The main and second floors contain the offices of the Executives and classrooms of the Departments of English, Mathematics, Modern Languages, and Economics.

Patterson Hall, the main Agricultural building, is a buff pressbrick structure, 204 feet long by 74 deep, of two stories and a basement. The lower floor is used as a dairy with washrooms and sterilization chamber. The first floor provides room for the offices of the Experiment Station and Extension Service, and for classrooms and laboratories of the departments of Agronomy, Horticulture, and Soils. The second floor accommodates the departments of Botany and Plant Pathology, and of Physiology and Veterinary Medicine.

Ricks Hall (Agricultural Extension Building). This latest addition to the agricultural group of buildings is now under construction and will be completed during the summer. It will be 61 by 184 feet, three stories high, with a full size, well lighted basement, making the equivalent of four stories. The frame work is to be of reinforced concrete and the exterior of pressed brick and granite, trimmed with limestone and terra cotta. It will be fireproof throughout. The approximate cost is $200,000.

When completed, the Extension Building will take care of all extension forces now housed in Patterson Hall and with the State Department of Agriculture, and will provide additional classrooms and laboratories for many of the agricultural courses.

The Animal Husbandry Building is of brick, two stories and basement. Rooms of the Poultry Department and a stock-judging room are included in the basement. The first floor is occupied by the departments of Animal and Poultry Husbandry. The second floor is devoted to the Department of Zoölogy and Entomology for laboratories and classrooms.

Winston Hall is built of brick, with reinforced concrete floors, three stories high, including the basement. The basement and main floor are occupied by the Civil and Electrical Engineering Departments for laboratories, instrument rooms, classrooms, and drafting rooms. The second floor contains recitation rooms and laboratories of the Department of Chemistry and the Chemical Department of the State Experiment Station.

The Old Mechanical Engineering Building is a plain, substantial two-story brick building furnishing room for the drawing and recitation rooms of the Mechanical Engineering Department, also for shop and storage space for the repair department.

The Textile Building is a two-story brick building, 150 by 75 feet, with a basement. Its construction is similar to that of a cotton mill, and is an illustration of standard construction of this class of buildings. The basement contains the dyeing department, the first floor the looms and warp preparation machinery, and the second floor the carding and spinning machinery.

Primrose Hall, one story and a basement, is used for the offices of the Rehabilitation Department, and also by the Extension Service for its department of Farm Demonstration.

The Shop and Laboratory Building is an illustration of the standard construction of modern shop buildings. It is a one-story and part basement L-shaped structure, one dimension being 170

feet and the other 195. The basement serves as a laboratory and storage room. The main floor embraces a machine shop, woodshop, forge shop, foundry and demonstration rooms, and tool rooms. Additions to this building under construction will be completed during the summer to provide spacious drawing rooms and recitation rooms for the department of Mechanical Engineering.

Pullen Hall is a two-story colonial brick building with a basement. The lower floor is used as an armory. The main floor gives quarters for the library and two classrooms. The upper story serves as the College auditorium, and seats about one thousand people.

The Dining Hall, which is 144 by 54 feet, will accommodate about seven hundred people. A large kitchen completely supplied with modern conveniences and utensils, the preparation rooms, serving rooms, store-rooms, etc., along with the hall proper, make this building an attractive feature of the College. Additions to this building now under construction will double its capacity.

The Y. M. C. A. Building is the home of the greater part of voluntary student activities. It is an attractive two-story and basement brick building handsomely equipped with mission furniture throughout. The basement contains the gymnasium, swimming pool, bowling alleys, shower baths, and athletic rooms. The main floor has a large lobby, with open reading and game rooms, an auditorium, a banquet hall, several bedrooms for visitors, and offices of the Association and of College publications. The upper floor contains two large society halls and rooms for Bible study classes.

The Infirmary is a two-story brick building containing separate rooms and wards for the care of the sick. Offices and rooms for the College physician and matron are also provided. The building is well equipped to serve its purposes.

Watauga Dormitory provides rooms for one hundred and twenty students. It is a three-story brick structure with a basement.

Nineteen-Eleven Dormitory, the largest dormitory on the grounds, is divided into sections by fireproof walls. It furnishes rooms for two hundred and forty students. Large and convenient bathrooms are located in the basement of the building.

First Dormitory, a two-story brick structure, affords accommodations for twenty students.

Second Dormitory, built on the same plan as the First Dormitory, will house twenty students.

Third Dormitory has rooms for twenty students.

Fourth Dormitory, a three-story brick structure, furnishes rooms for forty-eight students.

South Dormitory is a completed wing of what will soon be a handsome building similar to Nineteen-Eleven Dormitory. The wing furnishes rooms for forty-eight students. It is expected that by the opening of the fall term this building will be completed and ready for the accommodation of students. The dormitory will then contain 86 rooms, and provide homes for 172 students.

The Two Unit Dormitories provide accommodations for one hundred and forty students. These dormitories are of brick, two stories high. The rooms are all well lighted and well ventilated, with bathrooms on each floor. The buildings are fireproof throughout.

The Farm Buildings are nine in number: six barns, capacious and modern in every respect, for the housing of the stock and storing of feedstuffs and implements; the home of the dairyman, near the barns; two cottages for foremen of dairy and agronomy farms; the Horticulturist's home in the orchard; and the Poultry Plant, comprising the home of the instructor in charge and the various buildings and pens for the raising of fowls.

The Central Power Plant furnishes heat, light, and power for all the College buildings. The boiler plant consists of two 75-horsepower and two 150-horsepower boilers with a working steam pressure of 150 pounds. The engine plant is equipped with a 100-horsepower engine, generators, and steam and vacuum pumps.

AGRICULTURAL EQUIPMENT

Agricultural Engineering. This department is well equipped with agricultural farm equipment for lecture, field, and laboratory student work. Through the generosity of numerous branch houses and manufacturers, the laboratory is equipped with all the modern tilling, seeding, harvesting, and fertilizer distributing machinery that is suitable for use on North Carolina farms. The farm motors laboratory is equipped with thirteen different types of stationary gas engines, three lighting plants and water systems, and seven different types of traction engines. The laboratory is also equipped with testing instruments such as traction dynamometers, prony brakes, planimeters, and speed counters.

The irrigation and terracing laboratory is equipped with levels, ranging poles, rods, taps, hand axes, pins, etc.; also with spades and drain cleaners for laying out farm drainage and terracing systems.

Animal Husbandry and Dairying. The Department is well equipped to instruct students in the profitable types of farm animals, how to handle them so as to get the best returns, how to select breeding stock, and how to feed and market all classes of farm animals. The offices, classrooms, and laboratories are attractive and are arranged to give the students all the advantages possible. The department operates a farm, which is a laboratory for students taking Animal Husbandry subjects. The dairy barns are filled with more than sixty registered cattle representing four breeds. A sufficient number of swine are kept to give students practice in every phase of the industry. The same is true of horses and sheep. The farm is organized to emphasize the growing of permanent and temporary pastures, small grains, hay, and silage crops, all of which are fed to the animals belonging to the department.

Botany. The Department of Botany has two student laboratory rooms, a well equipped bacteriological laboratory, a temperature room, a dark room, a preparation room, and two offices. The laboratories are equipped with the necessary microscopes, apparatus for physiological work, and collections of plant materials for student use. The Library, which is installed in the Department, contains most of the more important modern botanical books and extensive bound files of American botanical journals.

Farm Crops. The equipment for teaching Farm Crops consists of standard apparatus and type trays for the study and determination of market grades of cereal grains and cotton. Other equipment consists of type samples of all cultivated legumes, grasses, cotton, and tobacco, dried plants and their seeds, and illustrative material in the form of charts, lantern slides, and pictures. Modern equipment will be used on the department farm in the field study and practice of good cultural methods for the production of field crops. Standard equipment is available for use in the teaching of Farm Management.

Horticulture. The Department of Horticulture has a Service Building, Greenhouse, and a laboratory furnished with necessary apparatus. The Horticultural grounds of twenty-five acres contain student vegetable gardens, orchards, vineyards, planting of berries, and spaces used for nursery purposes. The department has charge of the development of the College campus.

Poultry Husbandry. The poultry plant contains breeding pens suited to poultry keeping in North Carolina. Incubators, brooders, and other equipment are supplied. The laboratories are furnished complete with poultry appliances.

Soils. A completely equipped laboratory affords exceptional facilities for instruction in general soils. The College farm is used for the practical work in drainage, terracing, fertilization, and study of soil types.

Veterinary Science. The laboratories and the dissecting and pharmacy rooms are supplied with all necessary apparatus. For class and laboratory instruction there are mounted skeletons, specimens of diseases, and a collection of parasites which infest domestic animals.

Zoology and Entomology. This department has the second floor of the Animal Husbandry Building. An excellent laboratory is provided with the usual equipment of a Zoological laboratory. The department has a museum and its own library.

The new insectary and beekeeping laboratory furnishes much additional space for the study of injurious and beneficial insects and for the study of better beekeeping. In the beekeeping laboratory there are special rooms for hive making and for extracting honey and for the study of the anatomy of the bee, with an especially full and modern equipment in all lines of work.

ENGINEERING EQUIPMENT

Civil Engineering. The equipment consists of all instruments necessary for the laboratory and field practice in Civil Engineering, such as transits, levels, plane tables, sextants, etc. Apparatus is also furnished for testing cement. The department has its own library, and is well supplied with filing cases and reference maps.

Electrical Engineering. Quarters for this department are provided in Winston Hall. The classrooms are well equipped for lectures and demonstrations. The instrument laboratory is fully supplied with standardizing apparatus and measuring instruments. The dynamo laboratory is provided with various types and sizes of generators and motors and transformers, a complete equipment of measuring instruments, and ample capacity in storage batteries. Rooms for photometric measurements, high tension tests, and radio communication are provided, and a well equipped shop. A complete radio telephone transmitting station has been installed. Machinery of the College power plant is avail-

able for testing and inspection. The radio laboratory is well equipped for receiving and sending radio telephone and radio telegraph messages, as well as for carrying on experimental work in this field.

Highway Engineering. Complete laboratory for testing road-building material.

Mechanical Engineering. The Forge Shop is equipped with forty anvils and twenty double forges of the down-draft type, an exhaust system, a special gas furnace for the treatment of steel, and other necessary apparatus.

The Foundry equipment consists of a cupola, brass furnace, sand-sifter, core machine, core oven, molding machines, and all necessary tools for bench and floor work.

The Woodshop is excellently equipped with lathes, saws of various kinds, planes, jointers, mortisers, sanders, and other machinery essential to an up-to-date woodshop.

The Machine Shop contains lathes, shapers, drill presses, grinders, planer, milling machine, and a full equipment of necessary minor tools and conveniences.

The Mechanical Laboratory is supplied with steam, gasoline, oil, and automobile engines, with instruments for measuring, testing, and analyzing, and with 50,000-pound and 15,000-pound testing machines. The power plant is also available for tests.

The Drawing Rooms are equipped with tables, stools, cases for boards, reference files, and models. The Senior drawing room has a Universal Drafting machine in addition to other necessary equipment.

Physics. The William Kearney Carr Physical Laboratory includes two lecture rooms and six laboratories, excellently equipped. The research laboratories offer exceptional facilities for advanced study in Physics. They include a darkroom for work in light, a sound-proof room for acoustic work, and a shop and batten room. The equipment of these laboratories and the demonstration and research apparatus are of the highest grade.

CHEMICAL EQUIPMENT

The entire second floor of Winston Hall is given over to three classrooms, three large laboratories, a library, and other rooms of the department of Chemistry. The equipment is extensive and complete for the many courses offered.

TEXTILE EQUIPMENT

The equipment of this department consists of the latest types of cotton mill machinery, manufactured by American builders. Electricity is used as a motive power, the machinery of each department in the building being driven by a separate motor.

Carding. The card room is located on the second floor of the building. This room contains breaker, picker, finisher, lapper, cards, drawing frames, roving frames, combing outfit.

Spinning. This department is also located on the second floor. The equipment consists of five spinning frames, and machinery for spooling, twisting, reeling, winding, and warping.

Weaving. The entire main floor is given over to this department. For warp preparation the equipment consists of bobbin-winding machines, beaming machines, and a slasher. The looms, thirty in number, manufacture sheeting, gingham, toweling, and all kinds of fancy goods, including jacquards. The finishing is done by sewing and rolling, inspecting and brushing machines.

Dyeing. The basement of the building is fitted up with a classroom, laboratory, and dyehouse for instruction in dyeing, and with dyeing machinery. The laboratory has all the necessary apparatus for experimental and practical instruction. The dyehouse is equipped with the proper machinery needed in the dyeing of large quantities of material.

THE AGRICULTURAL EXPERIMENT STATION

The North Carolina Agricultural Experiment Station was established originally as a division of the State Department of Agriculture, in accordance with an act of the General Assembly ratified March 12, 1877. Its work was greatly promoted by act of Congress of March 2, 1887, known as the Hatch Act, which made a donation to each State for the purpose of making investigations in agriculture, and for publishing the results. The funds of the Experiment Station were further supplemented by the act of Congress of March 16, 1906, known as the Adams Act. Under the requirements of the Hatch Act, the Station became a department of the College and was conducted jointly by the College and the Department of Agriculture from 1889 to 1907, with the exception of three years. Under an agreement entered into between the Board of Trustees of the College and the Board of Agriculture in January, 1912, and authorized by act of the Legislature of 1913, the work of the Experiment Station, which covers all of the

experimental work in agriculture in the State, is jointly conducted and supported by the College and State Department of Agriculture.

The experimental work in the field in agriculture, horticulture, stock and poultry raising, dairying, etc., is conducted on the College farm and on the test farms of the Department of Agriculture in different parts of the State, and the laboratory investigations are conducted in the laboratories of the two institutions.

The Station is always glad to welcome visitors and to show them the work in progress. The Station conducts a large correspondence with farmers and others concerning agricultural matters. It takes pleasure in receiving and answering questions.

Bulletins relating to general farm matters, embodying the results of the experiments, are sent free to all citizens of the State who request them. A request addressed to the Agricultural Experiment Station, State College Station, Raleigh, will bring these publications. The Station is glad also to answer letters of inquiry.

AGRICULTURAL EXTENSION SERVICE

Yearly increasing amounts of Extension work have been done by the College and the North Carolina Department of Agriculture since their organization. At first this took the form of analyses of fertilizers, marls, phosphates, composts, and various agricultural products, and advice on these several matters. Farmers' Institutes were started at a later date and are continued at the present, and other forms of Extension service have been conducted along a number of lines. In 1906 Farm Demonstration work through county agents and special workers was begun, and Boys' and Girls' clubs were soon made a part of it.

This division conducts the Corn Clubs, Poultry Clubs, Pig Clubs, Potato Clubs, and Peanut Clubs for the boys and girls of the State, and the Canning Clubs for the girls. The active membership of these clubs is confined to young people between the ages of ten and eighteen years, but adults are permitted to join the Pig and Poultry Clubs, and get all instruction sent the active members. In these clubs the young people are taught to grow crops or animals upon their own farms according to the teachings of modern science, and are shown the wonderful possibilities of farming in accordance with a few fundamental scientific laws.

In addition to the instruction through monthly letters, bulletins, and visits of the Extension workers, club schools are held at the farm-life schools and at county-seats during the summer, at which the members are given two or three days of technical instruction.

There is also held at the State College of Agriculture and Engi-

neering during each August a one-week Short Course for members of all the clubs, conducted by the Extension Division.

Under a joint arrangement between the State College of Agriculture, the State Department of Agriculture, and the State Department of Education, perfected October 1, 1916, the State Agent in Boys' Club work was appointed State Supervisor of Secondary Agricultural Education. His duties pertain particularly to the supervision of the farm-life schools and the direction of agricultural teaching in the rural schools of the State.

Because of the very close relation between the club work and the school work, those in authority deemed it wise to place the direction of all this work under one supervision. The club work should be made the vitalizing agency for all agricultural teaching in the rural schools. By utilizing the "Home Project" plan and having all this work supervised from the same office, the teaching and practical work are more closely related.

In January, 1912, under an agreement entered into between the Board of Trustees of the College and the Board of Agriculture, and authorized by an act of the Legislature in 1913 (chapter 68, Public Laws of 1913), all of the Extension and Demonstration work in the State was brought together and conducted jointly by the two institutions, in coöperation with the United States Department of Agriculture.

The Congressional Smith-Lever Act of May 8, 1914, has made possible a larger development of the Extension Service. The Extension Service has for its main object the carrying of new information and good practices obtained in experimental work and in good farming to the farmers and farm women of the State, through county men and women agents and workers in special lines. These workers spend most of their time in the field in efforts to bring about better farming, better homes, coöperation among farmers, and more profitable marketing of farm products.

The Extension forces at headquarters are housed in the buildings of the College and of the State Department of Agriculture, offices and conveniences for work having been supplied by these two institutions, and in the main equipped by them.

THE PURPOSE OF THE COLLEGE

The College is an institution where young men of character, energy, and ambition may fit themselves for useful and honorable work in many lines of industry in which training and skill are requisite to success. It is intended to train farmers, mechanics, engineers, architects, draftsmen, machinists, electricians, metallurgists, chemists, dyers, mill workers, manufacturers, stock

raisers, fruit growers, truckers, and dairymen, by giving them not only a liberal but also a special education, with such manual and technical training as will qualify them for their future work.

It offers practical and technical education in agriculture, horticulture, animal industry, business administration, social science, civil engineering, mechanical engineering, electrical engineering, chemistry, dyeing, and textile engineering. It also offers practical training in carpentry, woodturning, blacksmithing, machinists' work, mill work, boiler tending, engine tending, dynamo tending and installation, electric light wiring, armature winding, and other subjects relating to practical electricity.

Although the leading purpose of the College is to furnish technical and practical instruction, yet other subjects essential to a liberal education are not omitted. Thorough instruction is given in English, mathematics, political economy, physics, chemistry, botany, zoölogy, physiology, and geology.

The College is not a place for young men who desire merely a general education without manual or technical training, nor for lads lacking in physical development, mental capacity, or moral fiber, nor for those who are unable or unwilling to observe regularity, system, and order in their daily work.

WHAT THE COLLEGE EXPECTS OF ITS STUDENTS

The College does not have many rules. It expects that its students will live rightly for their own sakes and for the sake of the State that is educating them. The fundamental law of the College is this: Always and everywhere, be a gentleman.

A record is kept of every student. If it is apparent from this record that a student is not studying or that his conduct is not meeting the requirements of the College, such student will be required to withdraw. Scandalous, vicious, or immoral conduct will necessitate immediate dismissal.

Students attend this College to fit themselves for a technical business life. They are therefore expected to be businesslike in their habits, to be prompt in their attendance, and regular at chapel, classes, shops, drills, and all other duties. To prepare themselves for their daily work, students are expected to observe in their own rooms the regular morning and evening hours of study, and to be absent from College only at the regular specified periods.

Students are expected to keep their rooms neat and sanitary; to refrain from disturbing one another by noise in the buildings or on the grounds—in short, to conduct themselves in their College home with the same courtesy, self-respect, and propriety that they do in their own homes.

Visiting poolrooms, leaving College after 11 o'clock at night, willful destruction of College property, drinking, immorality, gambling in all forms, hazing of any kind, disrespect to members of the Faculty or officers of the College, any conduct unbecoming a gentleman—it is expected that a student's self-respect will lead him to abstain from these offenses, and should any student be found guilty of them he will be dismissed from the College.

REPORTS AND SCHOLARSHIP

Regular reports of scholarship are sent by the Registrar to parents and guardians at the end of each term. Special reports are made whenever necessary. Whenever a student fails on a subject during a month, such failure is reported to his parents. Students who are persistently neglectful of duty, or manifestly unable to do the work required, will be discharged at any time. The Faculty will require any student to withdraw whenever it is plain that his stay in the institution is unprofitable to himself and to the college.

RELIGIOUS INFLUENCES

All students are required to attend chapel exercises in Pullen Auditorium each morning. These services are conducted by the President, by some member of the Faculty, or by some visiting minister or layman.

Each student is expected to attend religious services in Raleigh on Sunday morning at the church of his choice. The students are always welcomed in the Sunday schools of Raleigh, and a large number of them attend these services.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association is a voluntary organization among the students for the purpose of centralizing and directing the moral and religious life of the student body. The work is under the direction of a General Secretary, who is employed to give his entire time to the work, and of the following student officers: president, vice president, corresponding and recording secretaries, and treasurer. Active assistance is also given by an Advisory Committee, which includes three members of the Faculty and six prominent business men in Raleigh. The president and treasurer of the Association are ex officio members of this committee.

The membership fee for all College students is four dollars a year. This small fee was made possible during the session of 1916-17, when the student body, as a whole, expressed its desire of having every student, at the beginning of each term, pay over

to the College Bursar one dollar as his dues for the ensuing term. The fee has since been voluntarily increased to four dollars per year. Only members of evangelical churches may become active members.

A large number of men are trained each year in active Christian service through membership on the following standing committees, all of which are trained by the General Secretary in their particular work: Bible Study Committee, which has charge of the organization of voluntary Bible Study classes among the students; Religious Meetings Committee, which provides speakers and arranges programs for the weekly meetings of the Association; Mission Study Committee, which provides for Mission Study among the students; Social Committee, which provides means of social entertainment and diversion; and Finance Committee. Each committee is held responsible for its part of the Association's activities.

The Association is supported by a yearly appropriation from the College, by gifts from the Faculty, the parents of the boys, and the Alumni, and by its regular membership.

The Y. M. C. A. occupies its own building, which was erected at a cost of $41,000. This building is conveniently situated on the campus.

Parents or students wishing to obtain further information about the work of the Association may do so by addressing the General Secretary, State College Station, Raleigh, N. C.

ATHLETICS

The Athletic Association is organized by the student body to promote physical health and manly spirit through athletic sports. Under the direction of the Athletic Committee of the Faculty it promotes practice in baseball, basketball, football, track athletics, etc. The Association employs a director who devotes all of his time to the interests of this department.

The Athletic Park, Riddick Field, is situated in the center of the campus, conveniently located to all dormitories and to the dressing rooms, shower baths, and bathing pool in the Y. M. C. A. building. It is provided with concrete bleachers, built on the unit plan, supplemented with temporary wooden stands, to take care of the overflow at the larger games.

It is the aim of the College to encourage general participation in athletic sports by the students. In order to promote interest in athletics the College teams are allowed to play a limited number of games with the teams of other colleges, while all students are allowed and encouraged to take part in intramural games. The College recognizes that college athletics are pro-

moted for the benefit of its bona fide students, and in order to prevent abuses the following regulations in regard to intercollegiate games are in force:

Eligibility Rules of the North Carolina State College of Agriculture and Engineering

Any student in good and regular standing shall be eligible to represent this College in athletic contests, subject to the following conditions:

1. Before any student can become a member of any athletic team in the College and take part in any intercollegiate contest, he must apply to the Faculty Committee on Athletics and secure its approval of his application. It shall be the duty of the Faculty Committee on Athletics to see that the said student is properly enrolled in the College.

2. It shall be the duty of the Athletic Committee to inquire into and make record of the athletic experience of the applicant, and it shall be the duty of the applicant to appear before the committee and answer on his honor such questions as the committee may see fit to ask, on request of the committee.

3. No person shall participate in intercollegiate athletics at this institution until after the expiration of twelve months from the date of his matriculation here, and until he shall have completed the scholastic requirements of this institution.

4. No student shall participate who is receiving, has received, or has been promised, directly or indirectly, any money or financial concessions as compensation for or prior consideration to his playing.

5. No student shall participate in athletic sports who does not matriculate within thirty days of the opening date of the term.

6. No student shall be eligible to participate in intercollegiate contests if he has played on any baseball team which is a member of an organized league operating under the national agreement and under the supervision of the National Baseball Commission.

7. No graduate student who is not a bona fide applicant for a degree conferred by this College shall be allowed to participate.

8. No undergraduate student shall take part in any athletic contest who is not pursuing one of the regular prescribed courses of instruction or its equivalent, nor will he be allowed to participate if his class work is unsatisfactory. A student must have fifteen units in order to take part in any athletic contest.

9. No student shall be allowed to represent the College in any intercollegiate contest during any month if he has been reported deficient on a majority of his work for the preceding month.

10. Participation in intercollegiate athletics shall be limited to three years, over a five-year period, counting from the time of

first matriculation. Participation in any intercollegiate sport in any college year shall constitute one year of athletic participation.

11. The object of these rules is to allow only bona fide students to take part in athletic contests, and if it shall appear to the Faculty Athletic Committee that any student is or has ever been a professional athlete, or that he is in College for the purpose of taking part in athletics and not of getting an education, such student shall not be allowed to represent the College in any athletic contests.

These rules will be amended from time to time to conform to the rules of the Southern Intercollegiate Conference.

LIBRARY AND READING ROOM

The College Library occupies the first story of Pullen Hall. It contains over ten thousand volumes, in addition to a large number of uncatalogued Government documents and agricultural bulletins. There are reference libraries in connection with the various technical departments.

The reading room of the main library provides a good variety of literature, technical books, fiction, encyclopaedias, general reference books, and bound magazines. There are many periodicals, literary and scientific, and about one hundred daily papers.

No book may be taken from the library until it has been charged at the desk. Two weeks is the maximum period for which a book may be lent. No books may be borrowed while there are fines unpaid. Books not available for circulation are: (1) works of reference; (2) books temporarily reserved for the use of students in various courses of instruction; (3) bound magazines; (4) current periodicals; (5) books of especial value.

The library is open from 9 a. m. to 6 p. m., and two hours at night. On Sunday it is open from 2 p. m. to 6 p. m. The librarian, or an assistant, is always present to help the students in any line of research or reading.

STATE MUSEUM

Students have free access to the large collections of the State Museum. These collections furnish most excellent opportunities for studies in Geology, Mineralogy, Mining, Forestry, and Natural History.

COLLEGE SOCIETIES

Such college organizations are encouraged as tend to form good character, to develop manly physical vigor, and to promote literary, scientific, and technical research and training.

The Biag Society is composed of those students who have made the best record in biological and agricultural subjects. The membership is limited to twelve. The society meets monthly for the discussion of biological and agricultural questions.

Farmers Progressive Association. The students in the Farmers Course in Agriculture meet every Wednesday night during the winter term for a discussion of practical problems. The meetings are conducted in the manner of a Farmers Institute, and give training in conducting farmers' meetings, in ex tempore speaking on agricultural questions, and in the writing and reading of reports on various farm operations.

The Agricultural Club. The purpose of this club is to interest the Agricultural students in the practical side of Agriculture and start them to working along progressive lines.

Weekly meetings are held at which practical topics are discussed. Essays dealing with specific problems are read and debates held on current Agricultural questions. Liberal prizes are given in the various contests. A corn show open to all Agricultural students is held each year by the club.

The Tompkins Textile Society. The purpose of this society is to discuss textile problems and other subjects in connection with the textile industry. Meetings are held weekly, and great interest is taken in them by the textile students.

The Mechanical Engineering Society is a student branch of the American Society of Mechanical Engineers. The society is composed of Seniors and Juniors taking the Mechanical Engineering Course. It meets twice a month for the discussion of engineering subjects, and such work has proved very beneficial to its members.

Electrical Engineering Society. A student branch of the American Institute of Electrical Engineers was organized at the College several years ago. It holds weekly meetings for the reading and discussion of papers. At convenient intervals the society makes trips to inspect interesting electrical installations. From time to time addresses are made by visiting engineers.

The Berzelius Society meets weekly for discussion of chemical topics, and for reports upon the leading articles in the chemical journals.

The Pullen and Leazar Literary Societies afford excellent opportunities for practice in declamation, debate, composition, and parliamentary law, as well as opportunities for social pleasure and recreation.

REQUISITES FOR ADMISSION

Each applicant for admission must be at least sixteen years of age and must bring a certificate of good moral character from the school last attended.

FOUR-YEAR COURSES

Since September, 1921, 15 units of credit have been required for unconditioned admission to the four-year courses. Of these units 8½ are in specified subjects; 6½ are in elective subjects.

A unit is defined as a subject pursued in schools of approved grade for five periods a week throughout the year, each period being at least forty minutes.

Specified Subjects

	Units of Credit
English (standard requirements for college entrance)	3
History	2
Mathematics (Algebra through Progressions; Plane Geometry)	2½
Science (any one from Group A below)	1

Elective Subjects

SCIENCE AND VOCATIONAL SUBJECTS

Group A:	*Units of Credit*
Biology	½ or 1
Botany	½ or 1
Chemistry	½ or 1
General Science	½ or 1
Physics	½ or 1
Physiology and Hygiene	½ or 1
Zoology	½ or 1
Group B:	
Agriculture and Farm Practice	1 to 6
Civics and Social Science	½ to 2
Commercial Subjects	½ to 2
Drawing (freehand or mechanical)	½
Economics	1
Mechanic Arts	½ or 1
Mill Practice	½
Physical Geography	1

Foreign Languages:	*Units of Credit*
French	1 to 2
German	1 to 2
Latin	1 to 4
Spanish	1 to 2
History:	
American	1
English	1
General	1
Medieval and Modern	1
Ancient	1
North Carolina	½

Explanation

1. In Modern Languages, one unit of credit is allowed for each year's work. The first year's work should cover the grammar and about 200 pages of translation.

2. In Latin, one unit each is allowed for grammar and composition, Caesar (Books I-IV), Vergil (Books I-VI), and Cicero (six orations).

3. Standard high-school text-books are recommended for all subjects.

COLLEGE ENTRANCE REQUIREMENTS IN LITERATURE

PART I. *The books presented for study are arranged in four groups, from each of which one selection is to be made.*

Group I. (Drama)—Shakespeare's *Macbeth; Hamlet.*

Group II. (Poetry)—Milton's *L'Allegro, Il Penseroso,* and *Comus;* the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

Group III. (Oratory)—Burke's *Speech on Conciliation with America;* Washington's *Farewell Address;* Webster's *First Bunker Hill Oration,* and Lincoln's *Gettysburg Address.*

Group IV. (Essays)—Carlyle's *Essay on Burns,* with a selection from Burns's *Poems;* Macaulay's *Life of Johnson.*

PART II. *Books prescribed for reading are arranged in five groups, from each of which at least two selections are to be made.*

Group I. (Classics in Translation)—The Old Testament, comprising at least the chief narrative episodes in *Genesis, Exodus, Joshua, Judges, Samuel, Kings,* and *Daniel,* together with the books of *Ruth* and *Esther;* the *Odyssey,* with the omission, if desired, of *Books I-V, XV, XVI;* the *Æneid.* The *Odyssey* and the *Æneid* should be read in English translations of recognized literary excellence. For any selection from this group a selection from any other group may be substituted.

Group II. (Drama)—Shakespeare's *The Merchant of Venice, As You Like It, Julius Caesar.*

Group III. (Prose Fiction)—Dickens's *A Tale of Two Cities;* George Eliot's *Silas Marner;* Scott's *Quentin Durward;* Hawthorne's *House of Seven Gables.*

Group IV. (Essays, Biographies, etc.)—Addison and Steele's *Sir Roger de Coverley Papers;* Macaulay's *Lord Clive;* Parkman's *The Oregon Trail.*

Group V. (Poetry)—Coleridge's *The Ancient Mariner;* Scott's *The Lady of the Lake;* Tennyson's *The Coming of Arthur, The Princess,* or *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Browning's *Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Riel, Pheidippides, My Last Duchess, Up at a Villa—Down in the City, The Italian in England, The Patriot, The Pied Piper, "De Gustibus," Instans Tyrannus;* Arnold's *Sohrab and Rustum.*

NOTE.—Above is given the "Restricted List" of books for reading; the "Comprehensive List" can be had from publishers of text-books.

CERTIFICATES

Applicants for admission to the Freshman Class who present certified statements on the official College admission blanks from proper officials of high schools or other preparatory schools of approved standing that the applicant has satisfactorily completed the 15 units required by the College will be admitted without further examination. These certificates must be submitted to the Dean of the College for approval. It is of distinct advantage to the applicant to send in his certificate as early as possible.

Certificates mailed to the College should be directed to the Registrar's Office.

No applicant will be registered until his certificate is presented in proper form.

ADVANCED CREDIT

Students who have attended colleges of approved standing will be allowed credit for work done upon the presentation of proper certificates to the Dean, who, with the heads of the departments concerned, will determine their value. None except entrance credit is allowed for work done in secondary schools without examination at the College.

TWO-YEAR COURSES IN MECHANIC ARTS AND IN TEXTILE MANUFACTURING, AND THE ONE-YEAR COURSE IN AUTO MECHANICS

Ten high-school units are required for admission to the Two-Year Course in Mechanic Arts and in Textile Manufacturing, and the One-Year Course in Auto Mechanics. Of these units, two in English, one in Algebra, and one in History are prescribed; the remaining six are to be offered from the Elective Subjects as indicated.

TWO-YEAR COURSE IN PRACTICAL AGRICULTURE

The requirements for admission to the Two-Year Course in Practical Agriculture are Arithmetic through decimal fractions, English Grammar, and American History.

SESSION

The College session lasts nine months, and opens annually the first Wednesday in September and closes the last Tuesday in May, with a vacation of about two weeks at Christmas.

WASTE AND BREAKAGE

In order to promote greater care on the part of students in their use of college supplies and their treatment of college property, a deposit of $5 is required of each student to cover unnecessary breakage and waste. All losses due to carelessness and wanton destruction will be charged to this fund, and whatever balance remains at the end of the session will be returned.

EXPENSE

The total college expense of a Freshman student need not exceed $375.

The total college expense of a Freshman student having a scholarship need not exceed $330.

These amounts include cost of board, tuition, lodging, fuel and lights, fees and deposits, books, drawing instruments, laundry, and a moderate allowance for incidentals. They do not include allowance for clothing, pocket money, and contingencies.

It is suggested that the allowances which parents make their sons for contingencies and spending money should be kept small. Small allowances take away temptation to unwise living.

Detailed Information

The largest payment is made in September. On entrance, a Freshman student will need $150 to meet all of his various payments for the first month. But of this amount a payment of $22.50 for tuition may be deferred, if desired, to the first of November. This will reduce the first or entrance cost to $127.50 The $150 includes payment to the College of $104.50, of which $30 is a deposit for military equipment, uniform, and breakage, refundable in whole or in part as the property may be returned in good or in damaged condition. In the case of day students, or students rooming and boarding out of College, tuition will be paid on entrance.

Board is $18 per month, payable in advance on the first day of each calendar month from September through May. Board for less time than one month is charged for at the rate of 75 cents a day, or $4.50 per week. Refunds for board will be made on the basis of these charges.

Students withdrawing from College within ten days from date of entrance will have refunded to their parents or guardians all money paid by them to the College Treasurer except charges for board and lodging during the time they are in College. In special cases the right is reserved to modify or revoke this rule.

Refunds to students withdrawing later than ten days from date of entrance will be made in proportion to the length of time the students are in College. The right in special cases to modify or to revoke this rule is reserved.

Itemized Expense by Months

SEPTEMBER: Room rent, fuel, and lights, $20; incidental fee, $2; medical and hospital fee, $3; lecture fee, $1; Library fee, $1; furniture fee, $2; physical culture fee, $5; Y. M. C. A. fee, $2; military equipment and uniform deposit, $25; waste and breakage deposit, $5; board for September, $16; a total of $82 to be paid to the College. Tuition for one-half session, $22.50, may be paid at this time, which will make a total of $104.50 to be paid to the College. Forty-five dollars is required to buy books and drawing instruments and for incidentals.

OCTOBER: Board, $18.

NOVEMBER: Board, $18; tuition, if it was not paid in September, $22.50.

DECEMBER: Board, $12, through the 20th.

JANUARY: Tuition, $22.50; lodging and fuel and lights, $20; medical and hospital fee, $3; furniture fee, $2; physical culture fee, $5; Y. M. C. A. fee, $2; board, $17. A total of $71.50.

FEBRUARY: Board, $18.

MARCH: Board, $18.

APRIL: Board, $18.

MAY: Board, $18.

Class Fees and Deposits

Fees and deposits for laboratory work and for supplies vary with the class, the course, and the division. They will not be collected at time of registration, but later as required by the various departments of instruction. These fees and deposits are given in the following tables for all classes and courses. Changes and variations will be made at any time where the need is indicated.

DEPARTMENTAL FEES AND DEPOSITS

AGRICULTURAL STUDENTS

Senior		Junior		Senior		Junior	
Farm Crops	$ 2	Soils	$ 2	Drawing	$ 1	Drawing	$ 1
Zoology	2	Bacteriology	3	Mach. Shop	1	Mach. Shop	1
Chemistry	6	Farm Crops	2	M. E. Lab.	1	D. C. Lab.	2
Farm Surv. and Ter.	1	Entomology	1	E. E. Lab.	2	M. E. Lab.	1
Tractors	2	Plant Dis.	1	Chemistry	10	Chemistry	6
Research	3	Veg. Gard.	1	Design	3	Design	3
Anatomy	2	Fruit Grow.	1	Dyeing	3	Dyeing	3
Materia Medica	1	Zoology	2				
Pathology	1	Botany	1				
Poultry	2	Pruning	1				
Bacteriology	3	Chemistry	6				
Soils	2	Farm Mach.	1				
		Farm Motors	1				
		Farm Bldgs.	2				
		Histology	1				
		Anatomy	2				
		Pl. Physiol.	3				

ENGINEERING STUDENTS

Sophomore		Freshman		Sophomore		Freshman	
Plant Prop.	$ 1	Botany	$ 2	Drawing	$ 1	Drawing	$ 1
Dairying	3	Chem. Lab.	2	Phys. Lab.	1	Phys. Lab.	1
Chem. Lab.	3	Woodwork	1	Mach. Shop	1	Chem. Lab.	2
Physics	1	Drawing	1	Chem. Lab.	4	Mach. Shop	1
Zoology	2			Design	4	Botany	1

FEES AND DEPOSITS FOR SHORT COURSES

Two-year Course in Agriculture

Farm Shop	$2.00
Farm Mechanics	2.00
Fruit Growing	1.00

Two-year Course in Mechanic Arts

First Year:

Shop and Drawing	$2.00

Second Year:

Shop and Drawing	2.00

Two-year Course in Textile Industry

FIRST YEAR:

Designing	$4.00
Drawing	1.00
	$5.00

SECOND YEAR:

Designing	$3.00
Dyeing	3.00
Shop	1.00
	$7.00

NOTE.—The College Treasurer is forbidden by the Trustees to give credit.

All unused deposits are refunded to the student at the end of the session or upon his withdrawal from College. If he has overdrawn his deposit he is required to pay the amount of the overdraft.

If the student has a scholarship, he does not pay tuition.

Students entering after September will pay on entrance all the items enumerated under "September," less a credit in part for board and room rent.

WHAT A STUDENT NEEDS FOR HIS ROOM

The College rooms are supplied with necessary furniture. Each student, however, should bring with him two pairs of blankets, two pairs of sheets, one pillow and two cases, and two bedspreads for a single bed.

SCHOLARSHIPS CARRYING FREE TUITION

1. Regular Scholarships. When the College was chartered the Legislature required the Trustees to admit, free of tuition, one hundred and twenty young men. The only conditions attached to these scholarships are that they shall go to young men (1) who are unable to pay for all their education, and (2) who are of excellent moral character. As far as possible, these appointments are distributed among the different counties. Appointments are made by the President of the College, after inquiries as to the needs and character of applicants and after a written recommendation from a member of the Legislature from the applicant's county. Certificates of inability to pay have to be made by the applicant and his parents. Blanks are furnished for this purpose.

2. Agricultural Scholarships. The Legislature of 1913 authorized the College Trustees to give a limited number of agricultural scholarships to students who agree to teach for two years in an agricultural school, or to serve in an agricultural experiment station, or to farm in the State for two years after graduation. The same conditions as to financial inability and moral worth go with these scholarships as with the regular ones.

3. Textile Scholarships. During the past year a number of scholarships have been awarded by cotton mills and individuals to students taking the textile course. These scholarships have been awarded as an encouragement to young men to take the textile course and a recipient must have a good record both in scholarship and deportment. Scholarships are known by the names of the donors and are as follows: Ten Aberfoyle Scholarships by Aberfoyle Manufacturing Co., Chester, Penn.; one Chadwick-Hoskins Scholarship by Chadwick-Hoskins Co., Charlotte, N. C.; one Draper Scholarship by Mr. Arthur J. Draper, Charlotte, N. C.; one Harriss Scholarship by Mr. W. H. Harriss, New York City; one Tolar, Hart & Holt Scholarship by Tolar, Hart & Holt Mills, Fayetteville, N. C.; one Miller Scholarship by Mr. R. M. Miller, Jr., Charlotte, N. C.

4. Finley Loan Fund. As a memorial foundation to William Wilson Finley, President of the Southern Railway Company at the time of his death, that company has established a Finley Loan Fund for needy students of agriculture. The fund consists of $1,000. This will be lent to students who are making their way through college, and returned by them to the fund after they have finished college and gone to work. It will be administered by the Treasurer of the College and all beneficiaries will be named by the College.

SELF-HELP

Some students who are alert and energetic frequently earn part of their expenses in college. Some of the agricultural students find work at odd hours on the farm, in the orchard, in the barn, in the dairy. Some students act as agents for merchants and pressing clubs. The College employs a few students in the dining room and elsewhere. A student's ability to help himself will depend largely on his own power to find work and to hold it after he finds it. It must, however, be remembered that the duties of the classroom take most of a student's time. As College duties begin at 8 a. m. and do not end until 4:30 p. m., hours for remunerative work are very limited.

STUDENT LOAN FUND

The Alumni Association of the College established in the year 1900 a small fund to be lent to needy students of talent and character. This has been augmented from various sources, and now amounts to about $7,000. The loans are made at 6 per cent, and good security is required. Sufficient time for repayment is given to enable the student to earn the money himself. The amount lent to each student is limited. The purpose is to help young men who are willing to help themselves and who cannot find sufficient employment while in college to meet all their necessary expenses.

Contributions are solicited for this fund from students, alumni, and friends of education generally. The fund is administered by the College Treasurer, under the direction of the President.

TIME OF REGISTRATION

All students are required to register within twenty-four hours after reaching Raleigh. A failure to comply with this rule may lead the Faculty to decline to allow an applicant to register. A registration fee will be charged to students failing to register on the days appointed.

ABSENCES FROM COLLEGE

The College authorities wish to emphasize the danger of allowing the students' work to be interrupted by unnecessary absences from College. Students wishing to visit their homes will be required to present requests from their parents, addressed to the Dean of Students. It should be remembered that all time missed must be made up, under disadvantages. Absences from college usually mean the accumulation of extra work for the student to do. Most students have their time fully occupied with regular work. It is, therefore, especially important that students who are not carrying their work well shall not run up absences. Nor should it be forgotten that students who are doing well in their studies lose much by absences from their regular duties here, not only in time actually lost but also in the attendant distraction from their work.

BOARD AND LODGING

All students are required to board in the College dining hall or in approved boarding houses near the College, and to room in the College dormitories. An abundant supply of plain, nour-

ishing food, with as large a variety as possible, is furnished absolutely at cost. The charge at present is $18 per month, payable in advance.

Rooms in the College dormitories are supplied with electric lights, steam heat, and all necessary furniture except sheets, blankets, pillowcases, pillows, bedspreads, and towels, which each student must furnish for himself. The charge for lodging is by the month, and there is no reduction in case of withdrawal.

ROOMS

Dormitory accommodations at the College are sufficient now to provide for seven hundred students. The assignment of available rooms will be made on August 15th to young men who shall have applied for them, provided they are entitled to admission to College. Applicants for rooms will be furnished by the Registrar's office with blank forms for these applications. These blanks will carry some brief explanations, with rules regarding applications and assignments.

MILITARY TRAINING

Under the provisions of an Act of Congress, June 3, 1916, a unit of the "Reserve Officers' Training Corps" has been established.

Students, physically fit, becoming members of the corps, will receive an allowance for uniforms from the Government.

The Corps was established in 1917 in order to qualify students to become reserve officers of the United States Army. The training is given with the least possible interference with their civil careers, so that in time of national emergency there may be a sufficient number of educated men trained in military science and tactics to officer and lead intelligently the units of the large armies upon which the safety of the country will depend. The Corps will be considered as a Federal organization for the above purpose only. There is no obligation to become a part of the National Guard or of the Regular Army; no oath is taken that service will be required other than for the purpose of education. A training camp will be held for six weeks at the end of each academic year, the expense of these camps to be borne by the Government, each student receiving five cents per mile going to and from camp, suitable uniforms and subsistence, and one dollar a day while in attendance. This camp is required of Juniors taking R. O. T. C., and is optional with other classes.

Not less than four hours weekly are devoted to this military training during the Freshman and Sophomore years, and five

hours weekly during the Junior and Senior years. Beginning with the Junior year, such students as have completed satisfactorily the Freshman and Sophomore work, may, if they wish and if selected by the President of the Institution and the Professor of Military Science and Tactics, undertake the five hours a week course. These students will be given, in addition to the allowance on their uniforms, an allowance (at present, 1921-22, forty cents per day) as commutation of rations, and includes the vacation period between the third and fourth years, deducting for the time spent in camp. This amount will, however, not be paid until the student enters upon his fourth year.

Upon completion of the military training course to the satisfaction of the College authorities, graduates become eligible for commission in the Officers' Reserve Corps of the U. S. Army, but there is no obligation to accept such commissions.

Military Science and Tactics, four hours weekly, are required of all Freshmen and Sophomores. Advanced R. O. T. C. work is optional in the upper classes.

Reserve officers may be called to active duty in any forces raised for national emergencies.

In the Military Training it is not the intention to install complete and rigid application of military discipline and methods to the instruction of the students and to their daily life. However, the following characteristics of an officer and a gentleman, which are inculcated by a proper disciplinary training, will be insisted upon: neatness in dress, the cultivation of the manners and habits of a gentleman, a dignified and military bearing, loyalty, truthfulness, punctuality, kindliness, earnestness of purpose, and devotion to duty; the cultivation in the student body of esprit de corps, obedience of orders, acceptance of responsibility, and avoidance of excuses.

CARE OF THE SICK

Every effort is made to protect the health of young men in the College. Regular inspections of the entire institution are made once a year, or oftener, by the State Board of Health. Similar inspections are made monthly by the College Physician.

Each student has a regular routine of daily life, including abundant physical exercise in the shops and on the drill grounds.

In case of sickness, a student is taken immediately to the College Infirmary, where he receives medical attention and careful nursing.

The College physician visits the Infirmary daily at 3 p. m., and in cases of serious illness, as frequently as may be required.

A trained nurse has charge of the Infirmary at all times. The payment of the medical fee entitles a student to all the privileges of the Infirmary; and this includes the regular visits of the College Physician for all ordinary sickness. If a special nurse is needed in case of serious contagious disease or in case of other serious illness, parents are of course expected to pay such nurse or nurses. The medical fee does not cover special surgical operations or the attention of any medical specialist.

VACCINATION

By direction of the Trustees, no young man will be registered unless he has been successfully vaccinated within the past two years. The College greatly prefers that all applicants for admission should be vaccinated at home, and that a certificate of successful vaccination within the past two years be brought from the family physician. In case this cannot be done, the College Physician will vaccinate applicants before they are registered at the College, and a fee will be charged for vaccination. A blank form to be filled by the home physician will be mailed on application. It will save a great deal of time and trouble, therefore, to be vaccinated before applying for registration. In this way applicants will avoid the inconvenience and discomfort resulting from vaccination while at College. The size of scar resulting from a previous vaccination is not proof that revaccination is not needed.

PHYSICAL EXAMINATION

Every student will be given a physical examination before his registration is completed, this examination being conducted by the College Physician or by the Professor of Military Science and Tactics. It is suggested that every student get himself in the best possible physical condition so that he may begin his work without any avoidable physical handicap. The object of this examination is to discover any physical defects and to take proper steps to correct them.

TYPHOID INOCULATION

Believing that students may be safeguarded from typhoid fever by inoculation against this disease, to which young people are peculiarly susceptible, the College offers this preventive free of charge, and urges, but does not require, all of its new students to take the treatment. Parents are requested to join the College in recommending that their sons be inoculated here or to have them inoculated at home.

COURSES OF INSTRUCTION

The College offers courses of instruction in the following subjects:

I. Agriculture.

- **a. Four-year Course in General Agriculture.**
- **b. Four-year Specialized Courses in Agricultural Chemistry, Agricultural Engineering, Animal Husbandry, Biology, Farm Crops, Horticulture, Poultry Science, Rural Life, Soils, Veterinary Medicine, and Vocational Education.**
- **c. Two-year Course in Practical Agriculture.**
- **d. Winter Course in Agriculture.**

II. Business Administration and Social Science.

- **a. Four-year Course in General Business Administration.**
- **b. Four-year Course in Shop Management and Manufactures.**
- **c. Four-year Course in Agricultural Administration.**

III. Chemistry.

- **a. Four-year Course in Agricultural Chemistry (I. b.).**
- **b. Four-year Course in Chemistry.**
- **c. Four-year Course in Textile Chemistry and Dyeing (V. c.).**

IV. Engineering and Mechanic Arts.

- **a. Four-year Courses in Civil Engineering: Architectural Engineering, Civil Engineering, and Highway Engineering.**
- **b. Four-year Course in Electrical Engineering.**
- **c. Four-year Course in Mechanical Engineering.**
- **d. Four-year Course in Textile Engineering (V. b.).**
- **e. Two-year Course in Mechanic Arts.**
- **f. One-year Course in Auto Mechanics.**

V. Textile.

- **a. Four-year Course in Textile Manufacturing.**
- **b. Four-year Course in Textile Engineering.**
- **c. Four-year Course in Textile Chemistry and Dyeing.**
- **d. Two-year Course in Textile Manufacturing.**

VI. Graduate Courses.

Extending over one or more years and leading to advanced degrees. These are intended for students who have completed the Four-year Course and who desire further instruction and training in special subjects.

VII. Summer Session.

A six-weeks Summer Session for teachers, for school officials, and for candidates for admission to college. The work is adapted to the needs of teachers of primary, grammar, and high school grades.

Degrees.

The four-year courses offer a combination of practice and theoretical work, about half the time being devoted to lectures and recitations, and the other half to work in the shops, laboratories, drawing rooms, greenhouses, dairies, poultry yards, fields, and mills. They are intended to furnish both technical and liberal education. The degree of Bachelor of Science is conferred upon a graduate of the four-year courses in Agriculture, in Chemistry, and in Dyeing; and the degree of Bachelor of Engineering is conferred upon a graduate of the four-year Engineering course, or the four-year Textile course.

The short courses include nearly all of the practical work of the four-year courses with less theoretical instruction. They are intended for students who desire chiefly manual training. They do not lead to a degree.

I. AGRICULTURAL COURSES

a. **Four-year Course in General Agriculture.**
b. **Four-year Specialized Courses in Agricultural Engineering, Animal Husbandry, Biology, Farm Crops, Horticulture, Poultry Science, Rural Life, Soils, Vocational Education, Veterinary Medicine, and Agricultural Chemistry.**
c. **Two-year Course in Practical Agriculture.**
d. **Winter Course in Agriculture.**

FOUR-YEAR COURSES IN AGRICULTURE

The Agricultural Courses are so organized and arranged that they will enable students to acquire a correct knowledge of agriculture as an applied science, and at the same time become proficient in the best agricultural practices. The subjects taught in the first two years of the courses are fundamental and cultural, and give the information and training necessary for the best attainment and utilization of the technical work given as the courses progress. Thus the curricula of all the Agricultural Courses include English, Mathematics, Chemistry, Physics, Botany, Zoology, Geology, Soils, etc. Beginning with the Junior year, all students will be required to take the prescribed basic work in Agriculture, but each may choose his electives in the course in General Agriculture to fit himself better as a general farmer, or in one of the specialized courses—Farm Crops, Animal Husbandry, Horticulture, Soils, Vocational Education, Agricultural Engineering, Poultry Science, Biology, Agricultural Chemistry, or Rural Life—to prepare himself for some professional line of Agriculture. It is felt by the College that increasingly large numbers of young men taking Agriculture each year will find it wise to prepare themselves better to return to the farm by taking the General Course in Agriculture rather than for professional work by taking one of the specialized courses.

Instruction is given by text-books, lectures, and reference readings, and in laboratories, fields, orchards, gardens, barns, dairy, and poultry yards. Opportunity is given for specialization as the courses progress, that the student may become more proficient in his chosen work.

Young men who have completed one of the Agricultural Courses of instruction with good credit have exceptional opportunities for remunerative employment in many positions. In addition to the preparation given for the successful operation of their own farms, graduates in Agriculture may become farm managers, demonstration agents, teachers of agriculture and science in farm-life and other rural schools, orchardists, dairymen, or poultrymen, and

may fill many other responsible positions requiring technical training. Many State College graduates hold responsible positions in colleges, experiment stations and extension bureaus, and in various offices of the United States Department of Agriculture.

The four-year course in Agricultural Chemistry is described more fully under the head of Chemical Courses.

FOUR-YEAR COURSES IN AGRICULTURE, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Agricultural Engineering, 102	0	0	4	6
Animal Husbandry, 101	2	3	0	0
Botany, 101-102	5	7	5	7
Citizenship, B. A., 101	2	3	0	0
Chemistry, 101-102	2	2	2	2
Chemistry, Laboratory, 103-104	1	2	1	2
Composition and Rhetoric, English, 101-102	3	3	3	3
Farm Crops, 102	0	0	3	4
Mathematics, 101 (a)	3	3	0	0
Military Science and Tactics, 101-102	3	4	3	4
Totals	21	27	21	28

Sophomore Year

Chemistry, Analytical, 201	3	5	0	0
Chemistry, Organic, 204	0	0	2	2
Chemistry, Organic, Laboratory, 206	0	0	1	3
Dairying, A. H., 202	0	0	3	3
English, 201-202	3	3	3	4
Geology, Soils, 202	0	0	3	4
Physics, 207-208	3	4	3	4
Plant Propagation, Horticulture, 201	3	4	0	0
Poultry, 201	3	4	0	0
Zoology, 201-202	3	5	3	5
Military Science and Tactics, 201-202	3	4	3	4
Totals	21	29	21	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Bacteriology, Botany, 302	0	0	3	4
Economics, B. A., 301	3	3	0	0
Entomology, Zoology, 306	0	0	3	5
Animal Nutrition, A. H., 301	3	4	0	0
Genetics, Zoology, 302	0	0	3	4
Plant Diseases, Botany, 301	3	4	0	0
Soils, 301-302	3	4	3	4
	12	15	12	17
Minimum electives	9		9	
Totals	21		21	

Senior Year

Farm Practices, 401	1	1	0	0
Agricultural Economics, R. L., 401	3	3	0	0
Farm Management, F. C., 402	0	0	3	4
Fertilizers, Soils, 402	0	0	3	4
Veterinary Hygiene and Sanitation, Vet., 401	3	4	0	0
	7	12	6	8
Minimum electives	12		12	
Totals	19		18	

ELECTIVES

GENERAL AGRICULTURE

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Farm Machinery, Agr. Eng., 301	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Surveying and Terr., Agr. Eng., 403	3	4	0	0
Farm Marketing, R. L., 402	0	0	3	3
Cotton and Tobacco, F. C., 403	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

AGRICULTURAL ENGINEERING

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Farm Machinery, Agr. Eng., 301	3	4	0	0
Farm Buildings and Concrete, Agr. Eng., 303	3	4	0	0
Repairs of Farm Machinery, Agr. Eng., 304	0	0	2	4
Farm Motors, Agr. Eng., 306	0	0	3	5
Farm Mechanics, Agr. Eng., 308	0	0	1	3
	6	8	6	12
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Surv. and Terracing, Agr.Eng., 403-404	3	4	2	4
Tractors, Agr. Eng., 405	2	3	0	0
Pumps and Light Prob., Agr. Eng., 408	0	0	2	3
	5	7	4	7
Minors (see page 70)	7		8	
Total electives	12		12	

ANIMAL HUSBANDRY

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Sheep Production, A. H., 303	3	4	0	0
Swine Production, A. H., 305	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
Legumes and Grasses, F. C., 302	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Farm Meats and Stock Farm Management, A. H., 402	0	0	3	4
Dairy Cattle and Milk Production, A. H., 401	3	4	0	0
Animal Breeding, A. H., 403	3	4	0	0
Pedigree Study, A. H., 404	0	0	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

BIOLOGY

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Advanced Plant Morphology, Bot., 303-304	3	4	3	4
Comparative Anatomy, Zool., 303-304	3	4	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Systematic Botany, Bot., 406	0	0	3	4
Advanced Plant Physiology, Bot., 403	3	4	0	0
Embryology, Zool., 401	3	4	0	0
Apiculture, Zool., 404	0	0	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

FARM CROPS

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Cereals, F. C., 301	3	4	0	0
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
Advanced Stock Judging, A. H., 304	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Cotton and Tobacco, F. C., 403	3	4	0	0
Advanced Farm Crops, 405	3	4	0	0
Crop Improvement, F. C., 406	0	0	3	4
Farm Marketing, R. L., 402	0	0	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

HORTICULTURE

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Pomology, Hort., 301	3	4	0	0
Pruning and Spraying, Hort., 302	0	0	3	4
Farm Forestry, Hort., 303	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Vegetable Forcing, Hort., 401	3	4	0	0
Systematic Pomology, Hort., 403	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
Horticultural Seminar, Hort., 404	0	0	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

POULTRY SCIENCE

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Poultry Breeds and Judging, Poul., 301	3	4	0	0
Advanced General Poultry, Poul., 302	0	0	3	4
Poultry Anatomy, Poul., 305-306	3	4	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Poultry Diseases, Poul.. 401	3	4	0	0
Specialized Poultry Markets, Poul., 402	0	0	3	4
Incubation and Brooding, Poul., 404	0	0	3	4
Poultry Accounting, Poul., 403	1	1	0	0
Poultry Seminar, Poul., 405	2	2	0	0
	6	7	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

RURAL LIFE

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Farm Cost Accounting, F. C., 303	3	4	0	0
Rural Social Problems, R. L., 403	3	3	0	0
General Sociology, B. A., 302	0	0	3	3
Farm Finance, R. L., 312	0	0	3	3
	6	7	6	6
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Rural Organization, R. L., 409	3	3	0	0
Land Tenure and Utilization, R. L., 405	3	3	0	0
Farm Marketing, R. L., 402	0	0	3	3
Business Organization, B. A., 306	0	0	3	3
	6	6	6	6
Minors (see page 70)	6		6	
Total electives	12		12	

SOILS

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Chemistry, 315-316	3	4	3	4
Advanced Plant Physiology, Bot., 403	3	4	0	0
Soil Survey, 304	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Physical Chemistry, 413	3	5	0	0
Soil Analysis, Chem., 414	0	0	3	5
Advanced Soils, 403-404	3	4	3	4
	6	9	6	9
Minors (see page 70)	6		6	
Total electives	12		12	

VOCATIONAL EDUCATION

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Majors:				
Introduction to Education, Voc. Ed., 301-302	3	4	3	4
Farm Cost Accounting, F. C., 303	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
	6	8	6	8
Minors (see page 69)	3		3	
Total electives	9		9	

Senior Year

Majors:				
Education, Voc. Ed., 401-402	3	4	3	4
Education, Voc. Ed., 403-404	3	4	3	4
	6	8	6	8
Minors (see page 70)	6		6	
Total electives	12		12	

MINOR ELECTIVES

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Military Science and Tactics, 301-302*	3	5	3	5
Farm Machinery, Agr. Eng., 301	3	4	0	0
Farm Buildings and Concrete, Agr. Eng., 303	3	4	0	0
Farm Motors, Agr. Eng., 306	0	0	3	5
Swine Production, A. H., 305	3	4	0	0
Advanced Stock Judging, A. H., 304	0	0	3	4
Sociology, B. A., 302	0	0	3	3
Journalism and Correspondence, English, 303-304	3	3	3	3
Cereals, F. C., 301	3	4	0	0
Farm Cost Accounting, F. C., 303	3	4	0	0
Legumes and Grasses, F. C., 302	0	0	3	4
Fruit Growing, Hort., 305	3	4	0	0
Farm Forestry, Hort., 303	3	4	0	0
Vegetable Gardening, Hort., 304	0	0	3	4
French, Modern Language, 301-302	3	3	3	3
Spanish, Modern Language, 309-310	3	3	3	3
Adv. Poultry Breeds and Judging, 304	0	0	3	4
Adv. General Poultry, 302	0	0	3	4
Soil Survey, 304	0	0	3	4
Economic Zoology, 307-308	3	4	3	4
Introduction to Education, Voc. Ed., 301-302	3	4	3	4

*Students who enter R. O. T. C. are required to take one course in Modern Languages either in the Junior or in the Senior year.

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Military Science and Tactics, 401-402	3	5	3	5
Farm Equipment, Agr. Eng., 401	3	4	0	0
Farm Surveying and Terracing, Agr. Eng., 403-404	3	4	2	4
Tractors, Agr. Eng., 405	2	3	2	3
Dairy Cattle and Milk Production, A. H., 401	3	4	0	0
Animal Breeding, A. H., 403	3	4	0	0
Systematic Botany, Bot., 406	0	0	3	4
Advanced Plant Physiology, Bot., 403-404	3	4	or 3	4
Advanced Bacteriology, Bot., 401	3	4	0	0
Plant Ecology, Bot., 410	0	0	3	4
Cotton and Tobacco, F. C., 403	3	4	0	0
Crop Improvement, F. C., 406	0	0	3	4
Advanced Farm Crops, 405	3	4	0	0
Cotton Classing, F. C., 408	0	0	3	5
Types of Farming in N. C. and U. S., F. C., 404	0	0	2	2
Small Fruits, Hort., 406	0	0	3	4
Plant Breeding, Hort., 405	3	4	0	0
Landscape Gardening and Rural Improvement, Hort., 402	0	0	3	4
French, Mod. Lang., 305-306	3	3	3	3
Spanish, Mod. Lang., 311-312	3	3	3	3
Incubation and Brooding, Poul., 404	3	4	or 3	4
Rural Social Problems, R. L., 403	3	3	0	0
Farm Marketing, B. A., 402	0	0	3	4
Advanced Soils, 403-404	3	4	3	4
Animal Diseases, Vet., 410	0	0	2	3
Rural Sanitation, Zool., 405-406	1	1	1	1
Scientific Illustrating, Zool., 407	3	4	0	0
Scientific Photography, Zool., 408	0	0	3	4
Embryology, Zool., 401-402	3	4	or 3	4
Apiculture, Zool., 403-404	3	4	or 3	4
Horse, Mule, and Beef Production, A. H., 405	3	4	0	0
Seminar, Voc. Ed., 405-406 (Elective for Sen. in Voc. Ed. only.)	1	1	1	1

FOUR-YEAR COURSE IN AGRICULTURAL CHEMISTRY

Junior Year*

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Bacteriology, Botany, 302	0	0	3	4
Economics, General, B. A., 301	3	3	0	0
Animal Nutrition, A. H., 301	3	4	0	0
Genetics, Zool., 302	0	0	3	4
Soils, 301-302	3	4	3	4
Chemistry, Organic, 301	3	3	0	0
Chemistry, Physiological, 312	0	0	2	2
Chemistry, Physiological, Laboratory, 314	0	0	1	2
Chemistry, Quantitative Agricultural Analysis, 305-306	2	6	2	6
	14	20	14	20
Minimum electives	6		6	
Totals	20		20	
Electives				
Military Science and Tactics, 301-302	3	5	3	5
German, Mod. Lang., 201-202	3	3	3	3
Plant Diseases, Botany, 301	3	4	0	0
Entomology, Zoology, 306	0	0	3	5
Journalism and Correspondence, Eng., 303-304	3	3	3	3
Introduction to Education, 301-302	3	4	3	4
Chemistry, Organic, Laboratory, 303-304	1	3	1	3
Sociology, B. A., 302	0	0	3	3

*Freshman and Sophomore years are the same as for the four-year courses in Agriculture.

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Agricultural Economics, R. L., 401	3	3	0	0
Fertilizers, Soils, 402	0	0	3	4
Agricultural Physical Chemistry, 413	3	5	0	0
Soil Analysis, Chem., 414	0	0	3	5
Chemistry, Historical, 401	2	2	0	0
Chemistry, Industrial and Engineering, 415-416	3	5	3	5
Chemistry, Theoretical, 402	0	0	2	2
	11	15	11	16
Minimum electives	10		10	
Totals	21		21	
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Farm Marketing, R. L., 402	0	0	3	4
Advanced Soils, 403-404	3	4	3	4
Rural Sanitation, Zool., 405-406	1	1	1	1
Types of Farming in U. S. and N. C., F. C., 404	0	0	2	2
Advanced Bacteriology, Bot., 402	0	0	3	4
Quantitative Chemical Analysis, 409-410	3	6	3	6
Organic Chemical Laboratory, 303-304*	1	3	1	3
Organic Chemistry, 411-412 (Prerequisite, Organic Chemistry, 303-304)	3	5	3	5
Microchemical Analysis, 403	1	3	0	0
Chemistry, Organic, Qual. Anal., 404	0	0	1	3
German, Mod. Lang., 303-304	3	3	3	3
Rural Social Problems, R. L., 403	3	3	0	0

*If not elected in the Junior year this work must be taken in the Senior year.

FOUR-YEAR COURSE IN VETERINARY MEDICINE

Junior Year*

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Anatomy, Vet. Med., 301-302	6	9	4	6
Bacteriology, Botany, 302	0	0	3	4
Chemistry (Quantitative Anal.), 305	3	4	0	0
Chemistry, Physiological, 312-314	0	0	3	4
Genetics, Zool., 302	0	0	3	4
Animal Nutrition, A. H., 301	3	4	0	0
Stock Judging, A. H., 304	0	0	3	4
Histology, Vet. Med., 303-304	3	4	2	4
Materia Medica, Vet. Med., 305	3	4	0	0
Required	18	25	18	26
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Advanced General Poultry, 302	0	0	3	4
Total	21	28 or 30	21	30 or 31

Senior Year

Animal Breeding, A. H., 403	3	4	0	0
Anatomy, Vet. Med., 405-406	5	7	5	7
Dairy Cattle and Milk Production, A. H., 401	3	4	0	0
Embryology, Zool., 402	0	0	3	4
Pathology, Vet. Med., 407-408	3	4	3	4
Materia Medica and Pharmacy, Vet. Med., 402	0	0	3	4
Physiology, Vet. Med., 403-404	3	3	3	3
Required	17	22	17	22
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Horse, Mule, and Beef Production, A. H., 405	3	4	0	0
Medical Botany, Botany, 408	0	0	3	4
Total	20	26 or 27	20	26 or 27

*Freshman and Sophomore years are the same as for the four-year courses in Agriculture.

TWO-YEAR COURSE IN PRACTICAL AGRICULTURE

This course is designed to assist those who wish to become better farmers of different kinds, and who for one reason or another are unable to take any of the four-year courses in Agriculture offered by the College. It is planned in this course to provide a large amount of practical information and training in Agriculture. In teaching, emphasis will be given to better methods of general farming, stock raising, dairying, vegetable growing, and orcharding, and to the efficient use of farm implements and machinery. In this course considerable time will be devoted to a study of the best methods of fighting and controlling insect and disease enemies of crops and farm animals; to pruning and spraying; to farm carpentry, machinery, and conveniences; to soils and soil fertility; to the selection, growing, improvement, and marketing of the more important field crops; to poultry raising; to farm law; to farm organization and management; to the feeding, breeding, and management of farm animals; to the growing, handling, and selling of vegetable and orchard products; to the keeping of farm accounts; to rural-life questions; and to many other problems that are constantly coming up for solution on North Carolina farms. In connection with the studies, intensive practical work will be carried on in the field, at the barns, in the dairy, and in the orchard, so as to thoroughly familiarize those taking the course with the applications of the subjects taught by doing the things themselves. Although there will be no entrance examination, applicants must be seventeen years of age and must satisfy the Dean of Agriculture that they are sufficiently prepared in common school subjects to enable them to pursue the course with profit.

Each student must also present an honorable discharge from the school last attended or such certificates and letters as may be requested. At least one year's farm experience or its equivalent will be essential to get most out of the course. Each person who completes the course in a satisfactory manner will be awarded a certificate. Credits secured in the course will not lead to a college degree.

TWO-YEAR COURSE IN PRACTICAL AGRICULTURE

First Year

Subjects	First Term Credits	First Term Hours
English (Composition), 11	3	3
Farm Mathematics, 31	3	3
Plant Life, Botany, 11	3	4
Breeds and Judging, Animal Husbandry, 11	3	4
Corn and Small Grains, Farm Crops, 11	3	4
Agricultural Drawing, Agricultural Engineering, 11	1	3
Farm Chemistry, Chemistry, 11	3	4
Animal Life, Zoology, 11	3	4
Military Science and Tactics, 101	2	4
	24	33

Subjects	Second Term Credits	Second Term Hours
English, 12	3	3
Farm Mathematics, 32	3	3
Plant Life, Botany, 12	3	3
Legumes, Farm Crops, 12	3	4
Farm Shop Work, Agricultural Engineering, 12	1	3
Vegetable Growing, Horticulture, 12	3	4
Animal Life, Zoology, 12	3	4
Farm Chemistry, Chemistry, 12	3	4
Military Science and Tactics, 102	2	4
	24	32

Second Year

Subjects	First Term Credits	First Term Hours
Farm Motors and Tractors, Agricultural Engineering, 21	3	4
Fruit Growing, Horticulture, 21	3	4
Farm Insects, Zoology, 21	3	4
Plant Diseases, Botany, 21	3	4
Farm Poultry, Poultry, 21	3	4
Feeds and Feeding, Animal Husbandry, 21	3	4
Soils and Soil Fertility, Soils, 21	4	6
Military Science and Tactics, 201	2	4
	24	34

Subjects	Second Term Credits	Hours
Farm Equipment, Agricultural Engineering, 22	3	4
Farm Dairying, Animal Husbandry, 22	3	4
Farm Management, Farm Crops, 22	3	4
Rural Economic Organization, R. L., 22	2	2
Rural School Organization, R. L., 32	2	2
Farm Accounting, R. L., 42	2	2
Marketing Farm Products, R. L., 52	2	2
Animal Diseases, Veterinary Medicine, 22	2	3
Pruning and Spraying, Horticulture, 22	3	4
Military Science and Tactics, 202	3	4
	25	31

WINTER COURSE IN AGRICULTURE

This short course will deal in an intensely practical way with field and garden crops, soils, fertilizers, orcharding, poultry, livestock, diseases and insect enemies of crops and domestic animals, and farm management and equipment, including farm machinery and gas engines.

The instruction offered will be of the kind the energetic and ambitious farmer is seeking. The course will be given in January, 1923, and will continue for two weeks.

Two Weeks Farmers' Winter Course in Agriculture

Subjects	Hours a Week
Field Crops	6
Fruit and Vegetable Growing	4
Farm Dairying and Types	6
Farm Insects	3
Diseases of Crops and Their Control	3
Fertilizers and Lime	4
Diseases of Livestock	3
Poultry	3
Gas Engines	3
Farm Tractors and Machinery	9
Total	44

REHABILITATION COURSES

UNITED STATES VETERANS' BUREAU

Courses Open for Disabled Men

Arrangements are made by the United States Government for the training of soldiers, sailors, and marines who have been disabled during the recent war by injury or disease.

For men who have sufficient entrance credits, all courses that are given in the regular college are open, and encouragement is given to beneficiaries of the United States Veterans' Bureau to take one of the regularly prescribed college courses.

For men who do not have the necessary entrance requirements, special training is offered in General Farming, Poultry, Horticulture, Live Stock, Farm Mechanics, and Beekeeping.

Agriculture affords splendid opportunities. Many disabled soldiers desire to study scientific farming.

For information write to

UNITED STATES VETERANS' BUREAU, *Atlanta, Ga.*

II. BUSINESS ADMINISTRATION AND SOCIAL SCIENCE COURSES

a. General Business Administration.
b. Shop Management and Manufactures.
c. Agricultural Administration.

TRAINING FOR BUSINESS

The modern efficiency of lawyers, physicians, and engineers depends almost altogether upon the specific and thorough training which institutions of higher learning have for a number of years offered to men expecting to enter these professions. In recent years business administration, commerce, and agricultural economics have also become legitimate and even necessary fields for scientific investigation and college training. More progress has been made in the last twenty years in working out the principles underlying the efficient conduct of business than in all previous time. Manufacture, trade, accounting, banking, insurance, and merchandising have been reduced to sciences. The same is true of the field of agricultural economics. Farm cost accounting, farm organization and administration, rural credits, and the marketing of farm products demand business knowledge and training on the part of the farmer if he is to cope with the present day farm problems.

Modern business has become so complex in its organization and conduct that it is no longer possible to learn it, as was formerly done, solely by the method of apprenticeship. Much that was once learned by apprenticeship can be more easily and quickly acquired by a system of instruction in which the student can readily secure an understanding of and training in the more fundamental principles and methods of business. College men, trained for leadership in business and social life, ought not to remain mere machine workers for any great length of time. The men and firms into whose employ they enter have a right to expect that college-trained men will serve short apprenticeships in the more menial stages of industry and then become capable managers, superintendents, and directors of business in its larger aspects. It is not to be expected that students who have completed the course in Business Administration will be prepared to assume control, at once, of large business concerns. It is hoped, however, that as in law, engineering, and medicine, the apprenticeship will be materially shortened by the previous discipline and training offered in their college courses. Furthermore, many

students, especially in Agriculture and Textile Manufacturing, at the conclusion of their college careers enter immediately into the conduct and control of businesses of their own. They, even more than those who expect to be engaged as paid experts, should be well trained in the business aspects of their professions.

The Department of Agricultural Economics and Business Administration has committed itself to the task not only of training men to understand and direct the business aspects of their own professions, but to the task also of training them to understand and successfully function in the great business and civic life of modern society. It is therefore its purpose to train the student for business on the basis of a broad outlook on life. The modern business man should be a person who has a thorough understanding of his physical and social environment. Accordingly, courses in the basic sciences, English, Mathematics, and the Social Sciences will be a part of the curricula throughout the four years of college training. During the last two years of training the students will be given the opportunity of hearing lectures by successful business men who will be invited to address them from time to time, on the practical application of business knowledge.

The courses of the department are planned with an appreciation of the fact that a majority of the men who attend a college of Agriculture and Engineering want careful and thorough training in the technologies of these professions. In some of the curricula it is made possible for the student to take, in addition to his business courses, practically a three years course in some one of the various technical departments of the College. A student who has, therefore, completed the first two years of his college course can enter the department and complete the requirements for graduation with a B.S. degree in Business Administration. It is possible for a student to complete the course and receive a degree in Business Administration by pursuing full-time work in the Department of Business Administration for one year after receiving his degree in any one of the Departments of Engineering, Textile Manufacturing, or Agriculture.

A student can specialize four years in Science by completing the Science in the curriculum in General Business Administration during the first two years and choosing Science electives during the last two years. Four curricula are offered in the Department, one leading to the B.S. degree in Agriculture, one to the B.S. degree in Agricultural Administration, and two to B.S. degrees in Business Administration. The curriculum in Rural Life is one of the numerous Junior and Senior elective groups in the Department of Agriculture. The curriculum in Agricultural Adminis-

tration is designed to train men who are preparing themselves for demonstration work or some business position which deals chiefly with agricultural products. It is possible for a student, by completing the required work in this four-year course, to get one of the following combinations by choosing all his electives in one given field: viz., 61 credits in General Science, 51 credits in Business Administration, 48 credits in Technical Agriculture, 42 credits in English and foreign languages, and 33 credits in Mathematics. That is, by taking all the required work in any one of these fields of training and selecting all electives in the same field of training he could accumulate the above named amounts of credit. The curriculum in General Business Administration is a four-year curriculum in itself, and is designed to train more specifically for Business Administration positions. The curriculum in Shop Management and Manufactures consists of the first two years in any one of the Engineering or Manufacturing courses and two years of special training in Business Administration curricula in its entirety for four years. Each student will be required to spend one summer in some business organization or in conducting some investigation allied to the field of its study.

FOUR-YEAR COURSE IN GENERAL BUSINESS ADMINISTRATION, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
English, 101-102	3	3	3	3
Mathematics, 101(b)-102-104	5	5	5	5
*Science (some combination of Botany, 101-102; Chemistry, 101-102; Physics, 207-208, and Zoology, 201-202)	7–9	8–11	7–9	8–11
Citizenship, B. A., 101	2	2	0	0
History, Economic and Social, B. A., 102	0	0	3	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	19–21	22–25	20–22	22–25

Sophomore Year

English, 201-202	3	3	3	3
Mathematics or Science	3–5	5	3–5	5
Economics, B. A., 201	3	3	0	0
Sociology, B. A., 202	0	0	3	3
Psychology, V. E., 201	3	4	0	0
Political Science, B. A., 204	0	0	3	3
French, Mod. Lang., 205-206, or Spanish, Mod. Lang., 209-210	3	3	3	3
Military Science and Tactics, 202-203	2	4	2	4
Totals	17–19	21	17–19	17

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.

(2) First term courses are given the odd numbers; Second term, the even numbers.

(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

*If a science is chosen the first year of which was taken in the Freshman year, the second year of that science may be taken during the Sophomore year. If a science other than one which was taken during the Freshman year is chosen, then the first year of that science must be chosen.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
French, Mod. Lang., 305-306, or Spanish, Mod. Lang., 311-312	3	3	3	3
Money, Credit, and Banking, B. A., 303	3	3	0	0
Accounting, B. A., 304	0	0	3	4
Commercial and Business Law, B. A., 305	3	3	0	0
Business Organization, B. A., 306	0	0	3	3
Shop Management, B. A., 307	3	3	0	0
Commercial Geography, B. A., 310	0	0	3	3
English, 303-304	3	3	3	3
	15	15	15	16
Minimum electives*	5	5	5	5
Totals	20	20	20	21

Senior Year

Business Finance, B. A., 405	3	3	0	0
Public Finance and Taxation, B. A., 404	0	0	3	3
Commercial Marketing and Market Agencies, B. A., 407	3	3	0	0
Advanced Accounting, B. A., 412	0	0	3	4
Labor and Employment Problems, B. A., 408	0	0	3	3
Industrial Sociology and Personnel Administration, B. A., 410	0	0	3	3
Business Statistics, B. A., 411	3	3	0	0
	9	9	12	13
Minimum electives*	11	11	9	9
Totals	20	20	21	22

*Electives may be chosen from any courses in any department in the College provided the courses are of college rank.

FOUR-YEAR COURSE IN SHOP MANAGEMENT AND MANUFACTURES, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Junior Year*

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
General Economics, B. A., 301	3	3	0	0
General Sociology, B. A., 302	0	0	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Accounting, B. A., 304	0	0	3	4
English, 303-304	3	3	3	3
French, Mod. Lang., 305-306, or Spanish, Mod. Lang., 311-312	3	3	3	3
Commercial Geography, B. A., 310	0	0	3	3
Shop Management, B. A., 307	3	3	0	0
	15	15	15	16
Minimum electives†	3	3	3	3
Totals	18	18	18	19

Senior Year

Industrial Sociology and Personnel Administration, B. A., 410	0	0	3	3
Money, Credit, and Banking, B. A., 303	3	3	0	0
Business and Industrial Organization, B. A., 306	0	0	3	3
Commercial Marketing and Market Agencies, B. A., 407	3	3	0	0
Labor and Employment Problems, B. A., 408	0	0	3	3
English‡	3	3	3	3
Business Statistics, B. A., 411	3	3	0	0
	12	12	12	12
Minimum electives†	7	7	7	7
Totals	19	19	19	19

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

*The Freshman and Sophomore years are the same as for the courses in Engineering and Textile Manufacturing.

†Courses of college rank given in any department or departments of the College may be elected.

‡Course to be arranged.

THE FOUR-YEAR COURSE IN AGRICULTURAL ADMINISTRATION, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Agricultural Engineering, 102	0	0	4	6
Animal Husbandry, 101	2	3	0	0
Botany, 101-102	5	7	5	7
Citizenship, B. A., 101	2	2	0	0
Chemistry, 101-102, 103-104	3	4	3	4
English, 101-102	3	3	3	3
Farm Crops, 102	0	0	3	3
Mathematics, 101 (*a*)	3	4	0	0
Military Science and Tactics, 101-102	2	4	2	4
Totals	20	27	20	26

Sophomore Year

Commercial Geography, B. A., 310	3	3	0	0
Dairying, A. H., 202	0	0	3	3
English, 201-202	3	3	3	3
History, B. A., 102	0	0	3	3
Physics, 207-208	3	4	3	4
Plant Propagation, Hort., 201	3	4	0	0
Poultry, 201	3	4	0	0
Political Science, B. A., 204	0	0	3	3
Zoology, 201-202	3	5	3	5
Military Science and Tactics, 201-202	2	3	2	3
Totals	20	26	20	24

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Commercial and Business Law, B. A., 305	3	3	0	0
Farm Cost Accounting, F. C., 303	3	4	0	0
General Economics, B. A., 301	3	3	0	0
General Sociology, B. A., 302	0	0	3	3
Genetics, Zool., 302	0	0	3	4
Land Tenure, R. L., 405	3	3	0	0
Money and Banking, B. A., 303	0	0	3	3
Farm Finance, R. L., 312	0	0	3	3
	12	13	12	13
Electives*	9		9	
Totals	21		21	

Senior Year

Agricultural Economics, R. L., 401	3	3	0	0
Business Organization, B. A., 306	0	0	3	3
Business Statistics, B. A., 411	0	0	3	3
Commercial Accounting, B. A., 304	0	0	3	4
Commercial Marketing, B. A., 407	3	3	0	0
Farm Marketing, R. L., 402	0	0	3	3
Rural Organization, R. L., 409	3	3	0	0
Rural Social Problems, R. L., 403	3	3	0	0
	12	12	12	13
Electives*	6		6	
Totals	18		18	

*Electives may be chosen from any courses in any department in the College, provided the courses are of college rank.

III. CHEMICAL COURSES

a. Four-year Course in Agricultural Chemistry (see Agricultural Courses).

b. Four-year Course in Chemistry.

c. Four-year Course in Textile Chemistry and Dyeing (see Textile Courses).

The knowledge and skill of the chemist have become a very important factor in nearly all modern industrial development upon a large scale. Formerly the chemist was expected to protect the interest of the enterprise by analyzing the raw material to assure the corporation against loss, and to maintain the quality of the finished product. More is expected of the chemist of today. He should be able to discover uses for by-products, recover and convert waste material, devise new, efficient methods and machinery, discover the sources of loss and provide a remedy, and produce an output superior to that of competitors and at less cost.

Some of the industries calling for chemical skill are cotton-oil production and refining, ceramics, industrial alcohol, paper, soap, glue, aluminum, steel, gas, leather, dyestuffs, sugar-beet culture and manufacture, porcelain, glass, cement, sulphuric acid and nitric acid, medicinal extracts, synthetic medicines, electrochemical applications of water power, etc.

The student in Textile Chemistry and Dyeing learns how to make dyestuffs, and to apply them to the various fabrics in the dyehouse, as well as the chemistry involved in these processes. He is also given instruction in some elementary textile subjects. This course is described more fully by the Textile Department.

The student in Agricultural Chemistry receives the same instruction as the other Agricultural students throughout the Freshman and Sophomore years. This course is outlined in detail, along with the other Agricultural courses.

During the first two years the chemical courses are more or less fixed. With an increasing range of election in the Junior and Senior years, opportunity is given for general cultural studies throughout the course.

All three of the Chemical courses afford opportunity for some range in the choice of studies.

Provision is made also for graduate students in courses of study leading to the degree of Master of Science. These courses are arranged along the special lines in which the student is most interested. Our graduate and advanced undergraduate courses will specially appeal to college graduates who have become inter-

ested in Chemistry, and wish to pursue the subject further. Some of the subjects offered this year for graduate study are inorganic chemistry, physical chemistry, quantitative analysis, microchemical analysis, organic chemistry, physiological chemistry, and nitrification.

There are several chemical plants in the city which are open to our students through the courtesy of the owners. The chemical laboratories of the North Carolina Department of Agriculture and of the several divisions of the Agricultural Experiment Station afford students an opportunity to keep in touch with the interesting work of these institutions.

The State Museum contains a splendid collection of minerals, ores, and building stones, and affords students an opportunity for the study of the natural resources of the State.

The Chemical Department occupies the whole of the second floor of Winston Hall. There are four classrooms for about thirty students each. The classrooms are well lighted, and are provided with convenient lecture tables and settees with arm rests for taking notes.

The two laboratories for inorganic chemistry can accommodate three hundred and thirty-six students, the laboratory for qualitative analysis about ninety, for organic chemistry, electrochemistry, and for quantitative analysis about twenty each. A small laboratory has been set aside for special work. The laboratories are fitted up with conveniently arranged desks and hoods, each of which has the necessary water and gas connections. The balance room is located near the quantitative laboratory. The laboratory for physical and electrochemistry has been substantially enlarged during the past year.

The department has also a dark room for photographic work, fireproof rooms for combustion, ample stock rooms, and a preparation room.

The Chemical Library, containing an excellent collection of reference books and complete sets of some of the leading chemical journals, occupies a room convenient to the laboratories for the upper classmen.

The Berzelius Chemical Society meets on Tuesday evenings for the discussion of current chemical literature. The chemical students and members of the teaching staff take part in the work of the society.

The salary usually paid to chemical graduates immediately upon the completion of their courses is $1,500 or more. Many with experience are receiving $3,000, some $5,000, and a few over $7,000 a year as compensation. The Department has been unable to meet the demand made upon it for men.

Our chemical graduates have proven their ability and skill by the high salaries they are receiving in the industries, colleges, universities, and experiment stations of our country, by the leading part they are taking in the technical societies, and by their contributions to chemical literature.

FOUR-YEAR COURSE IN CHEMISTRY, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Chemistry, 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Algebra, Math., 101 (b)	5	5	0	0
Algebra, Math., 102	0	0	1	1
Geometry, Math., 104	0	0	4	4
Composition and Rhetoric, English, 101-102	3	3	3	3
Drawing, M. E., 103-104	1	3	2	6
Engineering Lectures, M. E., 102	0	0	1	1
Physics, 101-102	3	5	3	5
Woodshop, M. E., 105-106	1	3	1	3
Military Science and Tactics, 101-102	2	4	2	4
Citizenship, B. A., 101	2	2	0	0
Totals	21	31	21	33

Sophomore Year

Chemistry, Analytical, 201-202	3	6	3	6
English, 201-202	3	3	3	3
Physics, 201-202	4	6	4	6
Trigonometry, Math., 201	5	5	0	0
Analytical Geometry, Math., 202	0	0	5	5
German, Modern Language, 201-202	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	20	27	20	27

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Chemistry, Organic, 301-302	3	3	3	3
Chemistry, Organic, Laboratory, 303-304	1	3	1	3
Chemistry, Quantitative Analysis, 305-306	2	6	2	6
English, 301-302	3	3	3	3
German, Modern Language, 303-304	3	3	3	3
Electrochemistry, 307-308	3	3	3	3
Electrochemistry, Laboratory, 309-310	1	3	1	3
	16	24	16	24
Minimum electives	3	4	3	4
Totals	19	28	19	28
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Sociology, B. A., 302	0	0	3	3
French, Mod. Lang., 205-206	3	3	3	3

Senior Year

Chemistry, Historical, 401	2	2	0	0
Chemistry, Industrial and Eng., 415-416-417-418	3	5	3	5
Chemistry, Theoretical, 402	0	0	2	2
Chemistry, Physical, 405-406	3	3	3	3
Chemistry, Physical, Laboratory, 407-408	1	3	1	3
Chemistry, Quantitative Analysis, 409-410	4	12	4	12
	13	25	13	25
Minimum electives	6	6	6	6
Totals	19	31	19	31
Electives				
Military Science and Tactics, 401-402	4	5	4	5
Chemistry, Organic, 411-412	3	5	3	5
Chemistry, Physiological, 312-314	0	0	3	4
Microchemical Analysis, 403	1	3	0	0
Shop Management, B. A., 307	3	3	0	0
Mechanical Engineering, Laboratory, 415-416	2	4	2	4
Power Plants, M. E., 401-402	3	3	3	3
French, Mod. Lang., 305-306	3	3	3	3
English, 401-402	3	3	3	3
German, Modern Language, 403-404	3	3	3	3

IV. ENGINEERING AND MECHANIC ARTS COURSES

a. **Four-year Courses in Civil Engineering: Architectural Engineering, Civil Engineering, and Highway Engineering.**
b. **Four-year Course in Electrical Engineering.**
c. **Four-year Course in Mechanical Engineering.**
d. **Four-year Course in Textile Engineering (see Textile Courses).**
e. **Two-year Course in Mechanic Arts.**
f. **One-year Course in Auto Mechanics.**

The Engineering Courses give a thorough grounding in such fundamental sciences as Mathematics, Physics, and Chemistry, and thorough drill in the application of the principles thus learned to engineering problems. The student is given practice in the use of engineering instruments and methods, and is encouraged to rely upon his own resources in the solution of problems. Though the courses are primarily technical and practical, they include subjects of general culture throughout all four years.

The Freshman years of all the Engineering Courses are similar and include much practical instruction. The student in the different shops learns the use of tools and the handling and manipulation of materials of construction. Instruction is given in working wood and iron. In the Sophomore year this work is continued in the pattern-making shop and in the foundry also. In the Physical laboratory much attention is paid to the practical value of such instruction. Here the student is taught the science of measurement and is trained to observe and work accurately. During these two years he is also given a thorough training in Freehand Sketching and Mechanical Drafting, skill in which is essential in all lines of engineering work.

Differentiation of the different engineering courses begins in the Sophomore year. The practical work here, in the shop, in the field, or in the laboratory, directs the student's attention to the specific phases of that branch of the profession he is to follow. In the Junior year the study of engineering methods is begun and is continued more fully in the Senior year. In all courses much time is spent during the Junior and Senior years in the laboratory, shop, mill, or field.

Upon the satisfactory completion of these courses the degree of Bachelor of Engineering is conferred. The advanced degrees of Civil Engineer, Electrical Engineer, Mechanical Engineer, and Textile Engineer may also be conferred upon graduates of three years standing who have had responsible charge of important work, upon complying with the College requirements.

More detailed descriptions of the different courses follow.

FOUR-YEAR COURSES IN CIVIL ENGINEERING

a. Civil Engineering.
b. Highway Engineering.
c. Architectural Engineering.

The aim of the course in Civil Engineering is to give such training as will enable our young men to take an active part in the work of advancing our State along material lines—developing its water power, building railroads and public highways, constructing water supply and sewerage systems for our towns, etc.

The student is given a large amount of practical work in the field and drafting room, and acquires a fair degree of efficiency in the use of the various surveying instruments, and in drafting. At the same time it is recognized that a successful engineer requires a well trained mind—one that reasons logically, accurately, and quickly. Therefore a thorough course is given in all those branches of applied mathematics which are involved in the solution of engineering problems.

The aim has been to make this preëminently a technical course; but subjects of general culture are included in order to give the student a broader mental training and better preparation for social and business life.

FOUR-YEAR COURSE IN CIVIL AND HIGHWAY ENGINEERING, LEADING TO THE DEGREE OF BACHELOR OF ENGINEERING

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Algebra, Mathematics, 101(b)	5	5	0	0
Geometry, Mathematics, 104	0	0	4	4
Advanced Algebra, Mathematics, 102	0	0	1	1
Composition and Rhetoric, English, 101-102	3	3	3	3
Elementary Physics, 101-102	3	5	3	5
Civil Engineering Lectures, 102	0	0	1	1
Wood Work, Mechanical Engineering, 105-106	1	3	1	3
Citizenship, B. A., 101	2	2	0	0
Mechanical Drawing, Mech. Eng., 103-104	1	3	2	6
Chemistry, 101-102	3	3	3	3
Chemical Laboratory, 103-104	1	3	1	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	30	21	33

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Elements of Design, C. E., 203-204	1	3	1	3
Descriptive Geometry, Civil Eng., 205	2	6	0	0
Materials of Construction, Civil Eng., 201-202	1	1	1	1
Theoretical Surveying, Civil Eng., 206	0	0	2	2
Field Surveying, Civil Eng., 208	0	0	1	3
Spanish, Mod. Lang., 207-208	2	2	2	2
English, 201-202	3	3	3	3
Trigonometry, Mathematics, 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
Physics, 201-202	4	6	4	6
Military Science and Tactics, 201-202	2	4	2	4
Totals	20	30	21	29

Junior Year

Theoretical Surveying, Civil Eng., 301	2	2	0	0
Railroad Engineering, Civil Engineering, 302	0	0	2	2
Surveying (Field Work), Civil Eng., 303	1	3	0	0
Topographical Surveying (Field), Civil Eng., 304	0	0	1	3
Topographical Drawing, Civil Eng., 306	0	0	1	3
Highway Engineering, Civil Eng., 307-308	2	2	2	2
Graphic Statics, Civil Eng., 309	1	3	0	0
Mechanics, Civil Eng., 311-312	3	3	3	3
Calculus, Mathematics, 301-302	4	4	4	4
English, 301-302	3	3	3	3
	16	20	16	20
Minimum electives	3	3	3	3
Totals	19	23	19	23
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Sociology, B. A., 302	0	0	3	3
Spanish, Mod. Lang., 311-312	3	3	3	3
Psychology, V. E., 201	3	3	0	0
History and Social Science, B. A., 102	0	0	3	3
Electrical Engineering, 301-302, 305-306	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Roofs and Bridges, Civil Eng., 401	3	3	0	0
Bridge Design, Civil Eng., 402 or Bridge Design, Civil Eng., 402H	0	0	3	6
Municipal Engineering, Civil Eng., 404	0	0	2	2
Railroad Surveying, Civil Eng., 405 or Highway Surveying, Civil Eng., 405H	1	3	0	0
Mechanics of Materials, Civil Eng., 407	3	3	0	0
Reinforced Concrete, Civil Eng., 408	0	0	3	3
Hydraulics, Civil Eng., 409	3	3	0	0
Railroad Engineering, Civil Eng., 411 or Highway Engineering, Civil Eng., 411H	2	2	0	0
Railroad Economics, Civil Eng., 412 or Highway Economics, Civil Eng., 412H	0	0	2	2
Water Supply, Civil Eng., 414	0	0	2	2
Mechanics, Civil Eng., 413	3	3	0	0
Astronomy, Civil Eng., 416	0	0	2	2
Laboratory, Civil Eng., 406 or Laboratory, Highway Engineering, 406H	0	0	1	3
Heat Engines, Mechanical Eng., 419-420	2	2	2	2
	17	19	17	22
Minimum electives	3	3	3	3
Totals	20	22	20	25
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Classics and Journals, Eng., 401-402	3	3	3	3
Spanish, Mod. Lang., 409-410	3	3	3	3
Shop Management, B. A., 307	0	0	3	3
Commercial Law, B. A., 305	3	3	0	0
Commercial Geography, B. A., 310	3	3	0	0
Business Finance, B. A., 405	3	3	0	0
Industrial Sociology, B. A., 410	0	0	3	3
Electrical Engineering, 401-402 (Prerequisite, E. E., 301-302 and 305-306)	3	3	3	3

FOUR-YEAR COURSE IN ARCHITECTURAL ENGINEERING

The General Assembly of North Carolina passed in 1915 an act entitled "An act to regulate the practice of architecture, and creating a board of examination and registration of same." The purpose of this law is to protect the builder as well as the bona fide

architect from the practice of inexperienced or poorly trained men. It is necessary for any one who wishes to qualify for this requirement to have had sufficient training and experience to enable him to pass creditably an examination given by the State Board.

To meet the demand for better trained men in the profession of Architecture, a new course in Architectural Engineering has been added to the curriculum. This course is the same for the Freshman and Sophomore years as that of Civil Engineering. The Junior and Senior years take up studies more purely architectural than those of the first two years. The whole course is a combination of the practical and theoretical technical training with that of the esthetic and cultural phases so necessary in the practice of architecture. The degree of Bachelor of Architecture will be granted to those who satisfactorily complete this course.

THE FOUR-YEAR COURSE IN ARCHITECTURAL ENGINEERING, LEADING TO THE DEGREE OF BACHELOR OF ARCHITECTURE

Junior Year*

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
History of Architecture, Arch. Eng., 301-302	2	2	1	1
Design, Arch. Eng., 303-304	2	6	2	6
Water Color, Arch. Eng., 306	0	0	1	3
Shades and Shadows, Arch. Eng., 308	0	0	1	3
Graphic Statics, Civil Eng., 309	1	3	0	0
Mechanics, Civil Eng., 311-312	3	3	3	3
Calculus, Mathematics, 301-302	4	4	4	4
French, Mod. Lang., 305-306	3	3	3	3
English, 301-302	3	3	3	3
	18	24	18	26
Minimum electives	3	3	3	3
Totals	21	27	21	29
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Sociology, B. A., 302	0	0	3	3
Spanish, Mod. Lang., 309-310	3	3	3	3
Psychology, V. E., 201	3	3	0	0
History, B. A., 102	0	0	3	3

*Freshman and Sophomore years are the same as for the course in Civil Engineering except for Modern Language requirements.

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Tall Buildings, Arch Eng., 401	3	3	0	0
Composition, Arch. Eng., 402	0	0	1	1
Design, Arch. Eng., 403-404	2	6	4	12
Clay Modelling, Arch. Eng., 405	1	3	0	0
Professional Practice, Arch. Eng., 406	0	0	1	1
Advanced Water Color, Arch. Eng., 407	1	3	0	0
Fire Protection, Arch. Eng., 408	0	0	1	1
Pen and Pencil Drawing, Arch. Eng., 409	1	3	0	0
Specifications, Arch. Eng., 410	0	0	1	1
Photography, Arch. Eng., 412	0	0	1	3
Roofs and Bridges, Civil Eng., 401	3	3	0	0
Municipal Engineering, Civil Eng., 404	0	0	2	2
Laboratory, Civil Eng., 406	0	0	1	3
Mechanics of Materials, Civil Eng., 407	3	3	0	0
Reinforced Concrete, Civil Eng., 408	0	0	2	2
Electric Lighting, Elec. Eng.,*	2	2	0	0
Heating, Ventilating, and Refrigeration, Mech. Eng. 408	0	0	2	2
	16	26	16	28
Minimum electives	3	3	3	3
Totals	19	29	19	31
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Classics and Journals, Eng., 401-402	3	3	3	3
Spanish, Mod. Lang., 311-312	3	3	3	3
Shop Management, B. A., 307	3	3	0	0
Commercial and Business Law, B. A., 305	3	3	0	0
Commercial Geography, B. A., 310	0	0	3	3
Business Finance, B. A., 406	0	0	3	3
Industrial Sociology, B. A., 410	0	0	3	3

*Course to be arranged.

FOUR-YEAR COURSE IN ELECTRICAL ENGINEERING

The utilization of electrical methods and appliances becomes yearly more essential in our industrial world, as there is hardly an industry in which they do not take an ever-growing part or render some important service. The ease of control, safety, efficiency, and flexibility of this form of power make it equally suitable for transmitting the human voice over the telephone, for hauling the heaviest freight train over a mountain grade, for driving the largest rolling mill, for running a sewing machine, or transmitting a message to a ship at sea. The field of electrical application is as wide as our industry and seems to offer limitless opportunities for development.

With this wide extension of electrical methods technical and scientific problems become more complex, and this in turn renders a thorough knowledge of electrical theory more essential. Many of the new problems necessitate the use of the labor saving methods of higher mathematics for successful solution. Moreover, a sound grounding in theoretical and applied mechanics and familiarity with the characteristic behavior of the various electrical machines become imperative. It is the object of the four-year course in Electrical Engineering to give this thorough training necessary.

In the Freshman year the fundamental sciences of Mathematics, Chemistry, and Physics are studied, drill in English and training in the drafting room and shop are given, and a course of lectures on electrical systems and apparatus gives the student a general idea of the field covered by his profession.

In the Sophomore year Mathematics, Physics, and English are continued, as well as training in the drafting room and shop. Practice is given in the installation, care, and repair of electrical machinery. This year includes a course in French.

In the Junior year a thorough study of electrical theory is begun. This is accompanied by well planned, coördinated work in the Electrical Engineering Laboratory. The study of higher Mathematics and of English is continued. The study of Theoretical Mechanics is begun, and a course in Heat Engines, accompanied by laboratory work, makes the student familiar with these forms of prime movers.

In the Senior year the theoretical study of electricity is continued, accompanied by problems in design and work in the Electrical Engineering Laboratory; the latter includes training in the more elaborate methods of electric and magnetic measurements, as well as in the operation and testing of machines. The transmission and distribution of electrical power is studied, with its

application in electric lighting, electric traction, shop and mill driving, industrial electrochemistry, and methods of electrical communication, including wire and radio telegraphy and telephony. During this year the study of mechanics and the strength of materials is continued, and courses in hydraulics and business administration are given. In all the above courses emphasis is placed on fundamental principles and methods in order that a broad, deep foundation for future development may be laid.

During the Junior and Senior years those students who do not take the military training elect subjects in the other departments, such as Economics, Industrial Engineering, Machine Shop, Modern Language, Physical Chemistry, etc.

THE FOUR-YEAR COURSE IN ELECTRICAL ENGINEERING, LEADING TO THE DEGREE OF BACHELOR OF ENGINEERING

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Algebra, Mathematics, 101 (b)	5	5	0	0
Geometry, Mathematics, 104	0	0	4	4
Advanced Algebra, Mathematics, 102	0	0	1	1
Composition and Rhetoric, English, 101-102	3	3	3	3
Elementary Physics, 101-102	3	5	3	5
Citizenship, B. A., 101	2	2	0	0
Electrical Engineering Lectures, 102	0	0	1	1
Wood Work, Mech. Eng., 105-106	1	3	1	3
Mechanical Drawing, Mech. Eng., 103-104	1	3	2	6
Chemistry, 101-102	3	3	3	3
Chemical Laboratory, 103-104	1	3	1	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	31	21	33

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent; the name or abbreviation of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Trigonometry, Mathematics, 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
English, 201-202	3	3	3	3
Physics, 201-202	4	6	4	6
Descriptive Geometry, Mech. Eng., 201-202	1	3	2	6
French, Mod. Lang., 203-204	2	2	2	2
Electrical Practice, 201-202	1	3	1	3
Surveying, C. E., 207	1	3	0	0
Military Science and Tactics, 201-202	2	4	2	4
Totals	19	29	19	29

Junior Year

Electrical Engineering, 301-302	3	3	3	3
Electrical Engineering Laboratory, 305-306	3	6	3	6
Mechanics, Mech. Eng., 309-310	2	2	2	2
Calculus, Mathematics, 301-302	4	4	4	4
English, 301-302	3	3	3	3
Heat Engines, Mech. Eng., 301-302	3	3	3	3
	18	21	18	21
Minimum electives	3	3	3	3
Totals	21	24	21	24
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Sociology, B. A., 302	0	0	3	3
Psychology, V. E., 201	3	3	0	0
History, B. A., 102	0	0	3	3
French, Mod. Lang., 305-306	3	3	3	3
Machine Shop, M. E., 305-306	1	2	1	2
Mechanism, M. E., 303-304	2	3	2	3

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Alternating Currents, E. E., 401-402	3	3	3	3
Electrical Transmission and Distribution for Lighting and Power, E. E., 405-406	2	2	2	2
Electrical Communications, 403	3	3	0	0
Electrochemistry, E. E., 404	0	0	3	3
Electrical Engineering Laboratory, 407-408	3	6	2	6
Electrical Design, 409-410	1	2	1	2
Mechanics, M. E., 405-406	3	3	2	2
Hydraulics, C. E., 410	0	0	2	2
Shop Management, B. A., 307	3	3	0	0
Industrial Sociology, B. A., 410	0	0	3	3
	18	22	18	23
Minimum electives	3	3	3	3
Totals	21	25	21	26
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Classics and Journals, English, 401-402	3	3	3	3
French, Mod. Lang., 401-402	3	3	3	3
Business Finance, B. A., 406	0	0	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Mechanism, M. E., 303-304	2	3	2	3
Machine Shop, M. E., 417-418	1	3	1	3

FOUR-YEAR COURSE IN MECHANICAL ENGINEERING

The course in Mechanical Engineering offers instruction in the scientific principles forming the foundation of all engineering, but with particular regard to the generation and transmission of power, and to the principles of the design, construction, and operation of machinery. To this end the course of instruction is as broad as it is possible to give in a technical school.

The major studies in the Freshman and Sophomore years are Chemistry, Drawing, English, Mathematics, and Physics. These supply the necessary preparation for the more advanced scientific and professional studies of the Junior and Senior years, which are Applied Mechanics, Materials of Construction, Machine Design, Steam Engineering, Thermodynamics, Hydraulics, Electrical Engineering, and Shop Management. Throughout the course the student devotes much time to shop practice in the large and well equipped shops of the College. There he becomes familiar with the methods, tools, and machinery employed in the best practice in the working of wood and of metals. He learns the possibilities of machine construction in connection with pattern, foundry, forge, and machine work, and lays a solid foundation for the future mechanical engineer.

In the various laboratories—Chemical, Physical, Electrical, and Mechanical—the student carries out experiments which both reveal and apply the natural laws of matter and energy, and he thus, in the best manner, supplements the theoretical instruction received in the classroom. It is in these laboratories that he finds educational opportunities which only the well equipped technical college can offer, and for which no equivalent exists in the most extended experience in the workshop or factory.

In addition to the excellent facilities which the College in itself offers for the theoretical and practical study of mechanical engineering, its surroundings are favorable in offering a diversity of examples of practical application of mechanical science. Within easy reach of the College are machine shops, foundries, pumping stations, and power plants which are open to the inspection of students. Thus the educational facilities of these industrial plants may be utilized for the benefit of the student.

Graduates of the course in Mechanical Engineering are fitted in the best way to derive the utmost value from the experiences of the professional work of after years. While it is not expected that the graduate will at once be a finished designer or contractor, it is true that in the course of a few years he will, as a rule, far outstrip his competitor who lacks the thorough and systematic training given by the technical course.

THE FOUR-YEAR COURSE IN MECHANICAL ENGINEERING, LEADING TO THE DEGREE OF BACHELOR OF ENGINEERING

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Elementary Physics, 101-102	3	5	3	5
Mechanical Drawing, M. E., 103-104	1	3	2	6
Wood Work, M. E., 105-106	1	3	1	3
Mech. Eng. Lectures, M. E., 102	0	0	1	1
Citizenship, B. A., 101	2	2	0	0
Algebra, Mathematics, 101 (b)	5	5	0	0
Advanced Algebra, Mathematics, 102	0	0	1	1
Geometry, Mathematics, 104	0	0	4	4
Composition and Rhetoric, English, 101-102	3	3	3	3
Chemistry, 101-102 Chemical Laboratory, 103-104	4	6	4	6
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	31	21	33

Sophomore Year

Physics, 201-202	4	6	4	6
Descriptive Geometry, M. E., 201-202	1	3	2	6
Trigonometry, Mathematics, 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
Foundry, Pattern Making, M. E., 203	1	3	0	0
Metallurgy, M. E., 205-206	2	2	2	2
Forge Shop, M. E., 204	0	0	1	3
English, 201-202	3	3	3	3
French, Mod. Lang., 203-204	2	2	2	2
Military Science and Tactics, 201-202	2	4	2	4
Totals	20	28	21	31

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophom ore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses ure given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviations of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Heat Engines, M. E., 301-302	3	3	3	3
Mechanics, M. E., 309-310	2	2	2	2
Calculus, Mathematics, 301-302	4	4	4	4
Mechanism, M. E., 303-304	2	4	2	4
Machine Shop, M. E., 305-306	1	3	1	3
M. E. Laboratory, M. E., 307-308	1	3	1	3
English, 301-302	3	3	3	3
Electrical Engineering, 303-304	2	3	2	3
	18	25	18	25
Minimum electives	3	3	3	3
Totals	21	28	21	28
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Sociology, B. A., 302	0	0	3	3
French, Mod. Lang., 305-306	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Power Plant, M. E., 401-402	3	3	3	3
Gas Engines, M. E., 403	3	3	0	0
Mechanics, M. E., 406	0	0	2	2
Mechanics of Materials, M. E., 405	3	3	0	0
Heating, Ventilation, and Refrigeration, M. E., 408	0	0	2	2
Machine Design, M. E., 409	2	6	0	0
Design, M. E., 410	0	0	2	6
Laboratory, M. E., 415-416	1	1	1	1
	1	3	1	3
Machine Shop Work, M. E., 417-418	1	3	1	3
Hydraulics, M. E., 412	0	0	2	2
Shop Management, B. A., 307	3	3	0	0
Industrial Sociology, B. A., 410	0	0	3	3
	17	25	17	25
Minimum electives	3	3	3	3
Totals	20	28	20	28
Electives				
Military Science and Tactics, 401-402	3	5	3	5
French, Mod. Lang., 401-402	3	3	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Commercial Geography, B. A., 310	0	0	3	3
English, 401-402	3	3	3	3

TWO-YEAR COURSE IN MECHANIC ARTS

In order to meet the necessities of young men who wish to prepare themselves for the industrial arts rather than for industrial science and art, the following two-year course in Mechanic Arts is offered.

This course does not lead to graduation, and it is not in any sense intended as a preparatory course for the regular four-year courses. It is designed simply to help young men better to fit themselves, by a year or two of practical work under competent and interested supervision, for their chosen sphere of industrial activity. No credit will be given toward graduation for work done in the first year of the two-year course.

First Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Mechanical Drawing, 11-12	2	6	2	6
Wood Work, M. E., 21-22	1	3	1	3
Forge Work, M. E., 31-32	1	3	1	3
Mechanical Technology, M. E., 41-42	2	2	2	2
Physics, 11-12	3	3	3	3
Algebra, 11	5	5	0	0
Plane Geometry, 12	0	0	5	5
English, 11-12	3	3	3	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	19	29	19	29

Second Year

Machine Drawing, Mechanical Eng., 51-52	2	6	2	6
Machine Shop Work, Mech. Eng., 61-62	2	6	2	6
Power Machinery, Mech. Eng., 71-72	3	3	3	3
Elementary Mechanics, Mech. Eng., 82	0	0	2	2
Gas Engine Laboratory, Mech. Eng., 92	0	0	1	3
Pattern Work, Mech. Eng., 81	1	3	0	0
Foundry, Mech. Eng., 91	1	3	0	0
Algebra, Mathematics, 101(b)-102	5	5	1	1
Geometry, Mathematics, 104	0	0	4	4
English, 101-102	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	19	33	20	32

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.

(2) First term courses are given the odd numbers; second term, the even numbers.

(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before numbers of the course.

ONE-YEAR COURSE IN AUTO MECHANICS

In order to meet the necessities of young men who wish to prepare themselves for the automobile industry rather than for industrial science and art, the following one-year course is offered.

This course does not lead to graduation, and it is not in any sense intended as a preparatory course for the regular four-year courses. It is designed simply to help young men better to fit themselves, by a year of practical work under competent and interested supervision, for their chosen sphere of industrial activity. No credit will be given toward graduation for work done in the one-year course.

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
English, 11-12	3	3	3	3
Algebra, 11	5	5	0	0
Plane Geometry, 12	0	0	5	5
Automobile Theory, M. E., 43-44	5	5	5	5
Automobile Practice, M. E., 43-44	4	12	4	12
Drawing, Mechanical, 11-12	1	3	1	3
Forge Work, 31-32	1	3	1	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	35	21	35

V. TEXTILE COURSES

a. Four-year Course in Textile Manufacturing.
b. Four-year Course in Textile Engineering.
c. Four-year Course in Textile Chemistry and Dyeing.
d. Two-year Course in Textile Manufacturing.

The Textile Department, which is a fully equipped Textile school, is known as the North Carolina Textile School, and contains all the necessary machinery for instruction in manufacturing cotton yarns and fabrics from the bale to the finished product. The department also contains the necessary equipment in both the experimental and the practical laboratories for chemical analysis as applied to bleaching and dyeing and for bleaching and dyeing larger amounts of raw cotton yarn in skein and cloth.

Four-year Course in Textile Manufacturing

This course offers complete facilities for full instruction in all branches of cotton manufacturing, including textile chemistry, bleaching, and dyeing. Practical training in Textile work begins in the Freshman year and forms a part of the work in each of the following years. The theoretical work is directly related to the practical work going on, and this combination offers the best means of studying cotton manufacturing in all its operations. The actual hours devoted to textile work are increased each year during the four years so that in the Senior year the student devotes most of his time to textile work. Each student produces for himself cotton yarns of different numbers, dyes and bleaches cotton and yarn, and makes shirtwaistings, dress goods, and other fabrics from his own designs and colorings.

THE FOUR-YEAR COURSE IN TEXTILE MANUFACTURING, LEADING TO THE DEGREE OF BACHELOR OF ENGINEERING

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Manufacturing, 101-102	2	3	2	3
Weaving, Textile Manufacturing, 103-104	2	3	2	3
Mechanical Drawing, Mech. Eng., 103-104	1	3	2	6
Engineering Lectures, Textile Eng., 106	0	0	1	1
Algebra, Mathematics, 101 (b)	5	5	0	0
Geometry, Mathematics, 104	0	0	4	4
Advanced Algebra, Mathematics, 102	0	0	1	1
Chemistry, 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Composition and Rhetoric, English, 101-102	3	3	3	3
Citizenship, B. A., 101	2	2	0	0
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	29	21	31

Sophomore Year

Carding and Spinning, Textile Manufacturing, 201-202	2	3	3	4
Weaving, Textile Manufacturing, 203-204	2	3	2	3
Designing, Textile Manufacturing, 205-206	2	4	2	2
Cloth Analysis, Textile Manufacturing, 208	0	0	1	2
Physics, 205-206	3	4	3	4
Dyeing, 209-210	2	4	2	4
Drawing, Mechanical Eng., 208	0	0	1	3
Trigonometry, Mathematics, 201	5	5	0	0
English, 201-202	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	21	30	19	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Manufacturing, 301-302	3	5	3	5
Weaving, Textile Manufacturing, 303-304	2	4	2	4
Designing, Textile Manufacturing, 305-306	3	4	2	2
Cloth Analysis, Textile Manufacturing, 308	0	0	1	2
Dyeing, Textile Manufacturing, 309-310	1	1	1	1
Dyeing, Laboratory, Textile Manufacturing, 311-312	1	3	1	3
Spanish, Mod. Lang., 307-308	2	2	2	2
English, 301-302	3	3	3	3
Motors, Electrical Eng., 309-310	2	2	2	2
	17	24	17	24
Minimum electives	3	3	3	3
Totals	20	27	20	27
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Accounting, B. A., 304	0	0	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Labor and Employment, B. A., 408	0	0	3	3
French, Mod. Lang., 205-206	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Manufacturing, 401-402	4	6	4	6
Weaving, Textile Manufacturing, 403-404	4	6	4	6
Designing, Textile Manufacturing, 405-406	3	3	3	3
Cloth Analysis, Textile Manufacturing, 407-408	1	2	1	2
Dyeing, Textile Manufacturing, 409-410	2	2	2	2
Dyeing, Laboratory, Textile Manufacturing, 411-412	2	4	2	4
Heat Engines, Mechanical Engineering, 419-420	2	2	2	2
	18	25	18	25
Minimum electives	3	3	3	3
Totals	21	28	21	28
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Spanish, Mod. Lang., 311-312	3	3	3	3
Teacher Training, Textile Manufacturing*	3	3	3	3
French, Mod. Lang., 305-306	3	3	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Labor and Employment, B. A., 408	0	0	3	3

*To be arranged.

FOUR-YEAR COURSE IN TEXTILE ENGINEERING

This course offers a complete training for young men who desire to take up the profession of Textile Engineering. The course differs from that of Textile Manufacturing in that more engineering subjects are added with a certain amount of Textile work so as to make the course thoroughly practical.

There is a growing demand for young men who wish to follow the textile industry along engineering lines.

THE FOUR-YEAR COURSE IN TEXTILE ENGINEERING, LEADING TO THE DEGREE OF BACHELOR OF ENGINEERING

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Eng., 101	1	3	0	0
Weaving, Textile Eng., 104	0	0	2	3
Chemistry, 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Mechanical Drawing, Mech. Eng., 103-104	1	3	2	6
Algebra, Mathematics, 101 (b)	5	5	0	0
Geometry, Mathematics, 104	0	0	4	4
Advanced Algebra, Mathematics, 102	0	0	1	1
Physics, 101-102	3	5	3	5
Composition and Rhetoric, English, 101-102	3	3	3	3
Citizenship, B. A., 101	2	3	0	0
Military Science and Tactics, 101-102	2	4	2	4
Totals	21	32	21	32

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Sophomore Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Eng., 201-202	2	3	2	3
Weaving, Textile Eng., 203-204	2	3	2	3
Trigonometry, Mathematics, 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
Physics, 201-202	4	6	4	6
Elements of Design, Civil Eng., 203-204	1	3	1	3
English, 201-202	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	19	27	19	27

Junior Year

Carding and Spinning, Textile Eng., 301-302	3	5	3	5
Weaving, Textile Eng., 303-304	2	4	2	4
Calculus, Mathematics, 301-302	4	4	4	4
Heat Engines, Mechanical Eng., 301-302	3	3	3	3
Laboratory, Mechanical Eng., 307-308	1	2	1	2
Mechanics, Civil Eng., 311-312	3	3	3	3
Spanish, Mod. Lang., 307-308	2	2	2	2
	18	23	18	23
Minimum electives	3	3	3	3
Totals	21	26	21	26
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Accounting, B. A., 304	0	0	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Labor and Employment, B. A., 408	0	0	3	3
French, Mod. Lang., 205-206	3	3	3	3

Senior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Eng., 401-402	3	4	3	4
Weaving, Textile Eng., 403-404	2	4	2	4
Electrical Engineering, 301-302	3	3	3	3
Electrical Engineering, Laboratory, 305-306	2	4	2	4
Mechanics of Materials, Civil Eng., 407	3	3	0	0
Reinforced Concrete, Civil Eng., 408	0	0	3	3
Power Plants, Mechanical Eng., 401-402	3	3	3	3
Laboratory, Mechanical Eng., 415-416	2	4	2	4
	18	25	18	25
Minimum electives	3	3	3	3
Totals	21	28	21	28
Electives				
Military Science and Tactics, 401-402	3	5	3	5
Spanish, Mod. Lang., 311-312	3	3	3	3
French, Mod. Lang., 305-306	3	3	3	3
English, 401-402	3	3	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Labor and Employment, B. A., 408	0	0	3	3

FOUR-YEAR COURSE IN TEXTILE CHEMISTRY AND DYEING

This course is especially for those who wish to engage in any branch of Textile Chemistry, Dyeing, Bleaching, Finishing, or in the manufacture or sale of dyestuffs and chemicals used in the textile industry, and is designed to give a scientific technical education to those who desire to follow these branches of industrial technology.

Dyeing as an art has long been practiced, but with the introduction of scientific methods has rapidly developed and has assumed a position in the front rank of applied sciences.

As the textile industries of the State increase, the need of young men who have been trained in the principles as well as the practice of the different factory operations becomes apparent. In the course in Textile Chemistry and Dyeing the student is taught the different practical methods of the dyehouse; the chemistry of dyestuffs, some of each class of which he actually makes; the chemical changes brought about by mordants, assistants, etc. He also learns color matching, dye testing, and the methods for the analysis of the different chemicals used in the dyehouse. He carries on the study of carding, spinning, weaving, designing, cloth analysis, etc., to the end of the Sophomore year, with the other textile students, and with them devotes attention to shop work, drawing, etc., together with such general studies as English, Mathematics, Physics, and Chemistry, which are required in all four-year courses.

THE FOUR-YEAR COURSE IN TEXTILE CHEMISTRY AND DYEING, LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

Freshman Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, Textile Manufacturing, 101-102	1	3	2	3
Weaving, Textile Manufacturing, 103-104	2	3	2	3
Mechanical Drawing, Mech. Eng., 103-104	1	3	2	6
Algebra, Mathematics, 101(b)	5	5	0	0
Geometry, Mathematics, 104	0	0	4	4
Advanced Algebra, Mathematics, 102	0	0	1	1
Chemistry, 101-102	3	3	3	3
Chemistry, Laboratory, 103-104	1	3	1	3
Composition and Rhetoric, English, 101-102	3	3	3	3
Citizenship, B. A., 101	2	2	0	0
Military Science and Tactics, 101-102	2	4	2	4
Totals	20	29	20	30

Sophomore Year

Carding and Spinning, Textile Manufacturing, 201-202	2	3	2	4
Weaving, Textile Manufacturing, 203-204	2	3	2	3
Designing, Textile Manufacturing, 205-206	2	4	2	2
Cloth Analysis, Textile Manufacturing, 208	0	0	1	2
Physics, 205-206	3	4	2	2
Dyeing, Tex., 209-210	2	4	2	4
Trigonometry, Mathematics, 201	5	5	0	0
Analytical Geometry, Mathematics, 202	0	0	5	5
English, 201-202	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	21	30	21	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers; second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

Junior Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Chemistry, Organic, 301-302	3	3	3	3
Chemistry, Organic, Laboratory, 303-304	1	3	1	3
Chemistry (Quantitative Analysis), 305-306	2	4	2	4
Dyeing, Textile Manufacturing, 309-310	2	2	2	2
Dyeing, Laboratory, Textile Manufacturing, 311-312	4	8	4	8
English, 301-302	3	3	3	3
German, Mod. Lang., 201-202	3	3	3	3
	18	26	18	26
Minimum electives	3	3	3	3
Totals	21	29	21	29
Electives				
Military Science and Tactics, 301-302	3	5	3	5
Economics, B. A., 301	3	3	0	0
Textile subject	3	3	3	3
French, Mod. Lang., 301-302	3	3	3	3
Sociology, B. A., 302	3	3	3	3
Accounting, B. A., 304	0	0	3	3

Senior Year

Chemistry, Historical, 401	2	2	2	2
Chemistry, Industrial 415-416-417-418	3	5	3	5
Chemistry (Quantitative Analysis), 409-410	5	10	5	10
Dyeing, 409-410	3	3	3	3
Dyeing, Laboratory, 411-412	4	8	4	8
	17	28	17	28
Minimum electives	3	3	3	3
Totals	20	31	20	31
Electives				
Military Science and Tactics, 401-402	3	5	3	5
German, Mod. Lang., 303-304	3	3	3	3
English, 401-402	3	3	3	3
Textile subject	3	3	3	3
French, Mod. Lang., 305-306	3	3	3	3
Commercial and Business Law, B. A., 305	3	3	0	0
Labor and Employment, B. A., 408	0	0	3	3

TWO-YEAR COURSE IN TEXTILE MANUFACTURING

This course is intended for young men who desire to learn some of the fundamental principles of Textile Manufacturing, and other subjects which will be of value in this work. The various textile subjects are taught by lecture and practical work on carding, spinning, and weaving machinery.

First Year

Subjects	First Term		Second Term	
	Credits	Hours	Credits	Hours
Carding and Spinning, 11-12	1	3	1	3
Weaving, 21-22	3	5	3	5
Designing, Tex. Mfg., 31-32	2	4	1	2
Cloth Analysis, 42	0	0	1	2
Drawing, M. E., 11-12	1	3	1	3
Forge Work, M. E., 31-32	1	3	1	3
Algebra, 11	5	5	0	0
Geometry, 12	0	0	5	5
English, 11-12	3	3	3	3
Military Science and Tactics, 101-102	2	4	2	4
Totals	18	30	18	31

Second Year

Carding and Spinning, 11-12	3	6	3	6
Weaving, 21-22	3	6	3	6
Designing, Tex. Mfg., 31-32	3	4	2	2
Cloth Analysis, 42	0	0	1	2
Drawing, M. E., 51-52	1	3	1	3
Machine Shop, M. E., 61-62	1	3	1	3
English, 101-102	3	3	3	3
Military Science and Tactics, 201-202	2	4	2	4
Totals	16	29	16	29

(1) Short courses are numbered from 1 to 100; Freshman from 101 to 200; Sophomore from 201 to 300; Junior from 301 to 400; Senior from 401 to 500; Graduate from 501.
(2) First term courses are given the odd numbers, second term, the even numbers.
(3) In cases where the department teaching the course is not apparent, the name or abbreviation of the department is given before the number of the course.

DESCRIPTION OF SUBJECTS

AGRICULTURAL ENGINEERING

For Four-year Courses

102. Agricultural Engineering. Farm shop work will consist of teaching the agricultural student how to do the ordinary repair and construction work which arises on the farm, with such tools and equipment as the average farmer may reasonably be expected to have. Sufficient elementary drawing and blueprint reading will be given to enable the student to sketch the broken part of the machine and order a duplicate if necessary. Each article made in this course must be useful on the farm. Required of Freshmen in Agriculture. Four credits, second term.

301. Farm Machinery. This is a practical course designed for students who wish to perfect themselves in the operation and care of all types of farm machinery. Laboratory practice will consist of a detailed study of the construction, design, calibration, and operation of tilling, cultivating, and harvesting machinery. Such other machinery as ensilage cutters, terracing machines, hay balers, etc., will also be studied. Three credits, first term. Elective for Juniors. Required in Agricultural Engineering.

303. Farm Buildings and Concrete. The study of building materials, designs and construction of farm buildings, and building location. Ventilation, lighting, heating, water supply, plumbing, and sewage disposal will be studied briefly in their relation to rural conditions. Laboratory practice consists of the design and construction of molds and forms, and study of methods of reinforcing, and proportions of mixture to be used in various farm buildings and equipment. Complete working drawings, with tracings and blueprints of some of the farm buildings will be made. Three credits, first term. Elective for Juniors. Required in Agricultural Engineering.

304. Repair of Farm Machinery. The practical method of repair, upkeep, and care of all kinds of farm machinery. The design and equipment of the farm power plant and shop. Laboratory practice consists of overhauling, repairing, and painting of the College farm machinery, and the use of repair catalogs, babbit solder, and simple wood and iron working tools. Two credits, second term. Required of Juniors in Agricultural Engineering.

306. Farm Motors. The practical study of the farm gas and steam engine, their use, care and repair. Laboratory practice will consist of the operation, care, and repair of different types of farm

gas and steam engines. Brake horsepower and fuel economy tests will be run by the students. Three credits, second term. Required of Juniors in Agricultural Engineering. Elective for other Juniors. Professor Bosque.

308. Farm Mechanics. This course is especially designed for those intending to teach Agriculture in vocational high schools. The work will include such subjects as are usually taught in vocational high schools, and will include soldering, tinning, erection of line shafting, belt lacing, power transmission, pipe fitting, farm wood work, and sufficient forging to enable the student to make ordinary farm repairs. One credit, second term. Required of Juniors in Agricultural Engineering. Elective for Juniors. Professor Bosque.

401. Farm Equipment. A study of farm and home equipment necessary for the up-to-date farm. Thorough study of tillage, seeding, haying, and harvesting machinery, water supply, sewage disposal, home light and power. Selection, cost, depreciation, and upkeep of farm equipment. Three credits, first term. Elective for all Seniors in Agriculture except those in Agricultural Chemistry and Veterinary Medicine. Professor Bosque.

403-404. Terracing and Farm Surveying. Theory to consist of chain surveying, adjustments and use of the instruments in leveling, compass and transit surveying, with special reference to application on farms. The necessary trigonometric formulas are taught in connection with this course. Practice in differential and profile leveling, use of precise and home-made levels in location of terraces, adjustment of levels, construction of the broad terrace and the soil saving dam. Trips will be made to terraced fields; one or more lectures illustrated with slides will be given. Three credits, first term. Required of Seniors in General Agriculture. Three credits, first term; two credits, second term. Elective for all other Seniors in Agriculture. Required of Juniors in Agricultural Engineering. Professor Bosque.

405. Tractors. The practical study of the care, operation, and handling of both steam and gas tractors. Laboratory practice to consist of the practical operation of tractors, making brake and drawbar tests when operating under field conditions; fuel economy tests will also be made. Two credits, first term; two credits, second term. Required of Seniors in Agricultural Engineering. Elective for other Agricultural Seniors. Prerequisite, Farm Motors 306.

408. Pumps, Lights, and Power Problems. A study of elementary hydraulics and its application to farm pumping and water supply; the use of electricity for light and power. Two credits, second term. Required of Seniors in Agricultural Engineering.

For Two-year Course

11. Agricultural Drawing. The use and care of common drafting tools, and the application of drawing to agricultural work. Plans of simple structures, and free-hand sketching of machinery parts. One credit, first term.

12. Farm Shop Work. Use and care of carpentry tools, and instruction in carpentry exercises. Construction of small buildings. Cement and concrete in farm work. Mixing, proportioning, and placing. One credit, second term.

21. Farm Motors and Tractors. The practical study of the farm gas engine and tractor; their use, care, and repair. The laboratory practice will consist of the operation, care, and repair of the different types of the gas engine and tractor. Where it is practical, the students will overhaul machines that have been damaged and sent to this department for repair. Three credits, first term (two-year course).

22. Farm Equipment. A study of farm machines; selection, strength, materials and qualities of tillage, planting, cultivating, and harvesting machinery. Farm fences; buildings and home-built equipment. Sewage disposal; water supply; farm light and power plants. Three credits, second term.

For Winter Course

Gas Engines, Farm Tractors and Machinery. Selection and operation of gas engines and tractors. Engine types and principles. Engine and tractor systems and accessories. When possible, specialists will be secured for intensive work on ignition, lubrication, governing, and colling systems. Fitting the tractor to the farm. Power farming.

ANIMAL HUSBANDRY AND DAIRYING

For Four-year Courses

101. Types and Market Classes of Livestock. A survey of the development of the livestock industry, with special reference to present conditions. Consideration is given to the fundamental principles of livestock judging; the relation of form to function, or production; the combination of characters indicating constitutional strength, temperament, capacity, and sexuality necessary in the development of animals for special purposes such as milk, meat, work, and speed production. Time is devoted to the market requirements of livestock and adaptation of the different types. First term, two credits. Required of Freshmen. Assistant Professor Haig.

202. Elements of Dairying. This course consists of the discussion of the fundamental principles of dairying. Lectures are given on the secretion and composition of milk, the testing of milk and cream for butter fat; the care of milk and cream; the construction, operation and care of the cream separator. Butter making and cheese making are discussed briefly. In the laboratory practical work is given in the testing of milk and cream, in the operation of cream separators, and in farm butter making. Second term, three credits. Laboratory fee, $4. Required of Sophomores. Assistant Professor HAIG.

301. Animal Nutrition. This course consists of lectures and recitations on the principles of animal nutrition, including the physiology of the digestion of feeds, the uses of nutrients in the body, feeding standards as adapted to different classes of farm animals, and a general survey of feeding stuffs. First term, three credits. Required of Juniors in all Agricultural Courses. Professor RUFFNER.

303. Sheep Production. Sheep husbandry is studied in its relation to mutton and wool production. Lectures and text-book readings emphasize practical methods of selection, handling the flock, feeding, housing, and marketing sheep and wool. Laboratory work is a study of types and breed characteristics, their relation to mutton and wool production, and the selection of sheep by judging. First term, three credits. Elective for Juniors in Animal Husbandry. Professor RUFFNER.

304. Advanced Stock Judging. In this course consideration is given to animal conformation, quality, and condition with reference to market and show-yard requirements; to the selection of horses, beef cattle, dairy cattle, sheep, and swine for the feed lot, the market, and exhibition, and to judging at livestock shows. Second term, three credits. Required of Juniors in Veterinary Medicine, Vocational Education, Farm Crops, and Animal Husbandry. Elective for all other Juniors except those in Agricultural Chemistry. Professor RUFFNER.

305. Swine Production. The discussion of types, breed characteristics, and adaptability of swine. Lectures emphasize the questions of breeding, feeding, housing, and marketing of swine. Practical work is given in the laboratory in selecting by judging. First term, three credits. Required of Juniors in Animal Husbandry. Elective for all other Juniors except those in Agricultural Chemistry. Assistant Professor HAIG.

401. Dairy Cattle and Milk Production. Dairy husbandry is studied largely in its relation to the producer of milk. The dairy breeds are considered as to their characteristics and adaptation.

Problems of the dairy farmer such as selection, management, feeding, calf raising, and dairy cattle barns are discussed. The laboratory work consists of studying dairy types and selection by judging. First term, three credits. Required of Seniors in Veterinary Medicine, and Animal Husbandry. Elective for all other Seniors except those in Agricultural Chemistry. Professor RUFFNER.

402. Farm Meats and Stock Farm Management. The first half of the term is devoted to questions relative to farm butchering, curing, and care of meats and the various products. A smokehouse is available, so that the studies can be made practical. The second half of the term is devoted to a study of successful methods of operating farms devoted chiefly to livestock production. A study of the best systems applied to North Carolina conditions. Second term, three credits. Required of Seniors in Animal Husbandry. Professor RUFFNER and Assistant Professor HAIG.

403. Animal Breeding. The improvement of domestic animals; variation and heredity of animal character; reproduction, development, selection, line breeding, inbreeding, cross-breeding, grading, and other factors dealing with the improvement of farm animals. First term, three credits. Required of Seniors in Animal Husbandry. Elective for all other Seniors except those in Agricultural Chemistry. Professor RUFFNER.

404. Pedigree Study. A study of the blood lines of the various breeds of livestock. Each student is expected to select one or two breeds of which he makes a special study, working out the pedigrees from the herd books of the most noted animals. Special study is made of the animals owned by breeders in North Carolina. Second term, three credits. Required of Seniors in Animal Husbandry. Professor RUFFNER.

405. Horse, Mule, and Beef Production. The first half of this course deals with methods of breeding, feeding, and handling horses and mules; the care and management of stallions, mares, foals, and work animals. The breeds are discussed as to their importance in the South. The horses and mules on the College farm are used in practice judging and selecting.

The second part of the term is devoted to a study of practical methods of selecting, feeding, management, finishing, and marketing beef cattle in North Carolina. Consideration is given to the breeder, feeder, butcher, and consumer. The course also emphasizes types, judging, breeds and market classes, and grades. A few animals are kept for this purpose. First term, three credits. Elective for all Seniors in Agriculture except students in Agricultural Chemistry. Assistant Professor HAIG.

Courses for Graduates

Students entering graduate work in Animal Industry should have a thorough training in the fundamental principles of the subject. The following graduate courses are offered:

501-502. Animal Nutrition. In this course there will be a study of recent scientific publications on the chemistry and physiology of the nutrition of animals and the chemical and physiological changes and processes involved in the activities of animal life. The student will be expected to follow out courses in assigned reading, hold conferences with the instructor, and submit regular reports on the progress of his studies. First and second terms.

503-504. Investigational Work. Students who wish to continue their studies along any particular line in the Department of Animal Husbandry and Dairying may, with the aid of the head of the department, select a definite investigational project, and devote at least half time to carrying on the investigation.

For Two-year Course

11. Breeds and Judging. The student begins with the breeds of livestock, making a thorough study of their development and characteristics and also of the pedigrees and performances of superior individuals among horses, cattle, sheep, and swine. The practical part of the course is devoted to the judging of horses, dairy cattle, beef cattle, sheep, and swine. Three credits. First year, first term. Assistant Professor HAIG.

21. Feeds and Feeding. This course embraces the principles and practice of animal feeding. After covering the principles of feeding it takes up the composition of feeding stuffs, their combinations into properly balanced rations, and the relation between the sustenance of animals and their products. Problems relating to balanced rations are solved. Three credits. First term, second year. Professor RUFFNER.

22. Farm Dairying. This course takes up a study of the care and handling of milk and cream on the farm, centrifugal separation, pasteurization, the testing of milk and milk products, and development of young dairy stock and the feeding of cows for the most economical production. Three credits. Second, term, second year. Professor RUFFNER.

For Winter Course

Farm Dairying. This course is given to furnish the student instruction regarding the dairy industry. It should be of use and interest to any farmer, whether he is especially interested in making

dairy farming the largest part of the farm operations or not. The subject material includes the testing of milk and cream for butter-fat, need and value of testing individual cows, the composition and properties of milk, its food value and use as a food, the separation of cream and farm butter-making, and the proper methods of handling milk and cream. It is the aim of this course to enable the student to recognize a good cow from a poor one and to feed his animals for profitable production. All discussions and work will be taken up from the farm viewpoint.

Types and Market Classes of Livestock. This course will consist of a brief study of the most important breeds and market classes of horses, cattle, sheep and swine. Their history, development, distinctive characteristics, adaptation and value to the stockman, butcher, and consumer, will be studied. The differences in function and conformation between pure-bred animals and scrubs, or natives, will be pointed out and emphasized. By lectures, demonstrations, and personal score-card practice, the students will learn the good points and defects of animals before them. After the use of the score-card is learned, work will be given in competitive judging.

ARCHITECTURAL ENGINEERING

301-302. History of Architecture and Ornament. Continuation of the technical and historical study of architecture and ornament of the renaissance and modern styles. Lectures with library research and sketching. Two credits, first term; one credit, second term. Required of Juniors in Architecture. Associate Professor SHUMAKER.

303-304. Architectural Design. Continuation of problems in design, composition, and planning. Research and drafting. Required of Juniors in Architecture. Both terms, two credits. Prerequisite, Architecture, 211-212. Associate Professor SHUMAKER.

306. Water Color Painting. Work from models and still life. Conventional and sketch rendering of architectural subjects. Required of Juniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

308. Shades and Shadows. Second term, one credit. A course in the determination of conventional shades and shadows as they occur on rendered drawings, and the theory of perspective in the practical construction and rendering of drawings. Associate Professor SHUMAKER.

401. Tall Buildings. Stresses in and design of steel-framed office buildings. Required of Seniors in Architecture. First term, three credits. Associate Professor SHUMAKER.

402. Principles of Architectural Composition. Discussion of the qualities of good architectural composition, as unity, character, scale, proportion, etc. Required of Juniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

403-404. Advanced Design. Advanced problems in design, composition and planning. In second term one major problem is studied and worked up in detail. Required of Seniors in Architecture. First term, two credits; second term, four credits. Prerequisite, Architecture, 311-312. Associate Professor SHUMAKER.

405. Clay Modeling. Work from architectural casts and sketches. Required of Seniors in Architecture. First term, one credit. Associate Professor SHUMAKER.

406. Professional Practice. Relation of architect to owner and contractor; professional ethics. Laws of business and contract, and other matters of practical value. Required of Seniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

407. Advanced Water Color. Rendering of architectural subjects. Out-of-doors sketching. Required of Seniors in Architecture. First term, one credit. Prerequisite, Architecture 322. Associate Professor SHUMAKER.

408. Fire Protection. A study of various methods of fire protection and fire prevention. Required of Seniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

409. Pen and Pencil Drawing. Work in pen and ink and pencil from casts of architectural subjects, antique sculpture, and ornament. First term, one credit. Required of Juniors in Architecture. Associte Professor SHUMAKER.

410. Specifications. The study and writing of specifications for different types of construction. Required of Seniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

412. Photography. Study and use of cameras. Making pictures from line and wash drawings. Exterior and interior detail. Landscape composition. Lantern slides. Required of Juniors in Architecture. Second term, one credit. Associate Professor SHUMAKER.

BOTANY

For Four-year Courses

101-102. General Botany. This course, which is basic for all plant work in the college, presents the fundamental structural and functional facts concerning plants. The first term is devoted to the

nature of crop plants, the student mastering the fundamental facts concerning their cells, tissues, and organs, together with the activities of these parts. In the second term a survey of the plant world is made, representative types being used to illustrate the principal groups. The comparative method is emphasized throughout; the student acquires some definite conceptions of evolution as it is exhibited in plants. Such highly important economic groups as bacteria, fungi (causing plant disease), and the crop producing plant families, receive special attention. Field studies of the plants on and near the campus are made. Fee, $2 for the year. Five credits, both terms. Required of all Freshmen in Agriculture. Professor Wells, Mr. Shunk, Mr. Martin.

301. Plant Diseases. This course consists of a survey of the more important plant diseases with the emphasis upon those which affect the crop plants of the South. Attention is not only given to symptoms exhibited by the host plant, but detailed studies are made of the causal organism with particular reference to its reproduction, with which stage or stages the spread of most diseases is associated. Control measures are also given a prominent place in the course. Fee, $4. Three credits, first term. Required of all Juniors in Agriculture except Veterinary and Agricultural Chemistry students. Elective for Agricultural Chemistry. Prerequisites, Botany 101-102. Professor Wells.

302. Agricultural Bacteriology. The subject-matter of this course includes an introduction to the principles of bacteriology, and is designed to serve as a basis for students contemplating specialization in applied phases of the subject, such as bacteria in relation to plant diseases, to human diseases, and to the diseases of domestic animals; soil bacteriology; dairy bacteriology; sanitation with reference to sewage disposal and water supplies; and the consideration of bacterially produced processes in the industries. The student becomes familiar through laboratory practice with methods employed in the culture and study of bacteria. Prerequisites, Botany 101-102. Fee, $3. Three credits, second term. Required of all Juniors in Agriculture. Mr. Shunk.

303-304. Advanced Plant Morphology. The student in this makes a survey of the plant world, studying types other than those seen in course 101-102. The work is conducted throughout from the comparative anatomical standpoint so that probable phylogenies are determined in so far as the comparative method makes this possible. Emphasis is given to the fungi and the green land plants. In the latter series an original diagrammatic method is used to help the student master the intricacies involved in the study of the evolution

of these forms which are characterized by alternation-of-generations. Prerequisites, Botany 101-102. Fee, $2. Three credits, both terms. Required of Juniors in Biology. Professor WELLS, Mr. SHUNK.

402. Advanced Bacteriology. Those who desire a more comprehensive knowledge in any of the special fields of bacteriology in order to fit themselves to enter into extension or investigational work may take this course. Elective for all Seniors except Veterinary students. Three credits, second term. Prerequisite, Botany, 302. Mr. SHUNK.

403-404. Advanced Plant Physiology. In this course opportunity is offered the student to acquaint himself with plant activities in a more intimate fashion than was possible in the general botany course (101-102). The student performs a series of advanced experiments, taking note throughout of quantitative as well as qualitative data. The aim striven for is to enable the student on the basis of first-hand information to properly and exactly visualize the plant from the functional standpoint. Prerequisite, Botany 101-102. Fee, $3. Three credits, first term. Required of Juniors in Soils, and Seniors in Biology. Three credits, either term. Elective for all Seniors except those in Veterinary Medicine and Agricultural Chemistry. Professor WELLS, Mr. SHUNK.

406. Systematic Botany. A course designed primarily to acquaint the student with the plants of the State, both cultivated and wild, and secondarily to give him some definite notions in regard to plant groups and their relationships. A broad knowledge of plant types is a genuine desideratum as a basis of most plant production work, especially in such fields of activity as Agronomy, Horticulture, and Forestry. Three credits, second term. Required of Seniors in Biology. Elective for all Seniors except those in Veterinary Medicine and Agricultural Chemistry. Prerequisites, Botany 101-102. Professor WELLS.

Genetics. Course offered in collaboration with Department of Zoology. See Zoology 302. Professors METCALF and WELLS.

408. Medical Botany. This course deals with medical plants and the poisonous plants of the United States which are known to cause losses in livestock. Identification of the local poisonous forms in the field will constitute a definite part of the course. The nature of the poisonous principles and their effects on animals are given attention. Three credits, second term. Elective for Senior Veterinary Students. Prerequisite, Botany 101-102. Professor WELLS.

410. Plant Ecology. A lecture and field course presenting the basic facts concerning the influence of environment in controlling the

distribution of plants. Some attention is also given to those structural adaptations in plants which are found associated with particular environments. The course closes with an investigation into the contribution that Ecology makes to the solution of certain crop problems, especially those that arise out of soil and climate situations. Prerequisites, Botany 101-102. Three credits, second term. Elective for all Seniors except those in Veterinary Medicine and Agricultural Chemistry. Professor WELLS.

For Two-year Course

11-12. Plant Life. A simplified course especially prepared for the two-year student. The fundamental facts concerning the crop plants are presented, together with the structure and activities of the roots, stems, leaves, flowers, and fruits, and their relation to food production. In the laboratory and field the student enjoys the opportunity to acquire his knowledge first-hand, or in a way in which it will be of the most value to him later. The practical applications of botanical knowledge are pointed out as the course progresses. Three credits, first year, both terms. Mr. MARTIN.

21. Plant Diseases. A study of the principal diseases affecting North Carolina crop plants with the emphasis on the following: (1) the annual loss to farm crops caused by diseases, (2) the increasing destructiveness of diseases in intensified farming, (3) the appearance and means of identifying the more important diseases, (4) the agencies concerned in the spread of plant diseases, (5) control measures. Three credits, first term, second year. Prerequisite, Plant Life 11-12. Mr. SHUNK.

For Winter Course

Diseases of Crops. This course will consist of lectures and practical exercises dealing with the destructive diseases of the important crops of the State. The following points will be especially emphasized: (1) The annual loss to farm crops caused by diseases; (2) the increasing destructiveness of diseases in intensified farming; (3) the appearance and means of identifying the more important diseases; (4) agencies concerned in the spread of plant disease; (5) selection of uninfected seed. Professor WELLS.

BUSINESS ADMINISTRATION AND SOCIAL SCIENCE

For Four-year Courses

101. Citizenship. The object of this course is to assist in developing, in all students of the College, an intelligent and sympathetic attitude toward the problems of citizenship. It deals with the practical, social, economic, civic, moral, and ethical problems of the

day. It is the purpose of the course to give such an understanding and appreciation of the social structure and social problems of our time as to develop on the part of the students judgment and convictions on the great civic and moral questions of individual and social conduct. Required of all Freshmen. Two credits, first term. Professor TAYLOR.

102. History. This is a course in modern history, beginning with that period in history which in general conforms to the beginning of the American Government and the Industrial Revolution. The purpose of the course is to give an understanding and appreciation of not only the historical and population facts of the modern era, but also of the economic and social facts. Required of Freshmen in Business Administration and Sophomores in Agricultural Administration. Elective for Juniors in Civil Engineering. Three credits, second term. Mr. .....

201 and 301. General Economics. This course is designed to be of equal value to students in all divisions of the College. It treats of the business aspects and economic organization of society. It includes a study of the great fundamental economic laws which apply to all professions and occupations; a study of the production, distribution, and value of economic goods; and a study of the institutions, agencies, and ideas which dominate, operate, and control the manner, means, and methods of making a living. This is an introduction to all other courses in Agricultural Economics and Farm Marketing and to all Economics and Sociology courses in Business Administration. Required of Sophomores in Business Administration, of Juniors in Shop Management, and in Agriculture, except Veterinary Science; elective for all other Juniors not taking R. O. T. C. Three credits, first term. Professor TAYLOR and Professor JOURNEY.

202 and 302. General Sociology. This course is an introduction to the scientific study of social life. It deals with the origin, development, structure, and function of all types of social organization. A number of practical social problems, such as poverty, crime, race problems, immigration, divorce, etc., are studied. The last half of the course is devoted to a study of social psychology, social institutions, and other forms of human association; social ideas, social processes, social controls, and social progress. Required of Sophomores in Business Administration; of Juniors in Shop Management, Agricultural Administration and Rural Life; elective for Juniors in all Agricultural courses except Veterinary Medicine, and for all Junior Engineering students not taking R. O. T. C. Three credits, second term. Professor TAYLOR.

204. Political Science. This is a course in American Government. It is a study of the organization and activities of local, State, and national government in the United States. A study will be made in this course of the Government of the United States in comparison with other modern governments. The purpose of the course is fundamentally to give the student not only an historical knowledge of the development, organization, and activities of his own Government, but to give him a thorough understanding and appreciation of the present working of the political organization of his society and his part in it. Required of Sophomores in Business Administration and Agricultural Administration, and elective for any other departments that select it. Three credits, second term. Associate Professor JOURNEY.

303. Money, Credit, and Banking. This course is a study of the principles, functions, and types of money, credit, and banking. It is a special study of credit instruments and banking institutions. A comparative study is made of the money, credit, and banking agencies of the world. Special emphasis is given to the present United States banking organizations and institutions. Required of Juniors in Business Administration and Agricultural Administration and of Seniors in Shop Management, and elective for all other departments that may select it. Three credits, second term. Associate Professor JOURNEY.

304. Elementary Accounting. An introduction to the study of accounting, intended for the general student of business as well as for the beginning student in accounting. The course is built around the principles of double entry bookkeeping as leading to the preparation of financial and income and higher accounting statements. The student will receive a thorough training in the theory of debit and credit, a distinction between capital and revenue expenditures, and a difference between assets and liability accounts. Practice is given in the keeping of a system of double entry books, the making of trial balances, profit and loss statements and assets and liabilities sheets, and the closing of books. Single entry bookkeeping will be treated, and methods of changing a set of single entry books to double entry considered. Throughout the course the theory of debit and credit accounts will be stressed. Required of Juniors in Shop Management and Manufacturing and General Business Administration, and of Seniors in Agricultural Administration. Elective for others. Three credits, second term. Mr. LANCASTER.

305. Commercial and Business Law. (*a*) The division of law; legal terminology; composition of American law; English common law; constitutional and statutory law. (*b*) Law of contracts, including the formation, necessary elements, different kinds of contracts,

legality of particular agreements, form and evidence of contract, operation and discharge, breach and damages for breach, transfer and assignment. (*c*) Agency: law of agency as applied to principal and agent, and to master and servant, formation of these relationships, and rights and duties arising in connection with various classes of agency, factors, brokers, and auctioneers. Required of Juniors in Shop Management and Manufactures, General Business Administration, and Agricultural Administration. Elective for others. Three credits, first term. Mr. LANCASTER.

306. Business Organization. A systematic descriptive survey of the different forms of business enterprise. The individual firm, partnerships, joint-stock companies, corporations, trusts, holding companies, and their various purposes and problems. This is a course in the evolution, form, and operation of different forms of business organization. Required of Juniors in General Business Administration and Seniors in Agricultural Administration, Shop Management and Rural Life. Elective for others. Three credits, second term. Associate Professor JOURNEY.

307. Shop Management. Much attention is being given today to the study and analysis of types of shop organization and management for the purpose of arriving at fundamental operating principles. This course stresses management technique work, and considers such problems as the following: the efficiency movement, functionalization of organization, types of management, physical plant layout, typical organizations and organization charts, production management, standardization, fatigue and time and motion studies, routing, scheduling, dispatching, application of management problems and principles to small shop organizations. Required of Juniors in Shop Management and Manufactures and in Business Administration, and of Seniors in Chemistry and in Mechanical and Electrical Engineering. Elective for other Juniors and Seniors. Three credits, first term. Mr. LANCASTER.

310. Commercial Geography. World geography as influencing the commercial life of man, viewing the factors of production, distribution, and consumption from their worldwide aspects. This study includes a survey of such problems as the following: our changing environment, the production of raw materials, basic manufacturing industries, expansion of industry and resources, the law of trade, the world highway, the ocean and its carriers, recent world changes and the Panama Canal, trade and trade routes of the continents, the trade center—its work and development; balance of trade and its relation to industrial development, commercial policy of nations. Required of Sophomores in Agricultural Administration, and of Juniors in

Shop Management and Manufactures and General Business Administration. Elective for others. Three credits, second term. Mr. LANCASTER.

404. Public Finance and Taxation. This course is a study of the characteristics of public expenditures, classification of public expenditures, development of public revenue and taxation, growing need of public revenues, the various kinds of taxes, public indebtedness, and the administration of public funds. Required of Seniors in General Business Administration. Elective for others. Three credits, second term. Associate Professor JOURNEY.

405. Business Finance. This is a study of the principles and practices involved in the levying, collection, and administration of taxes and in the handling of the revenues and expenses of nations, states, counties, and municipalities. It is a study of the relation of the state to its industries and its citizens in terms of its system of taxation and expenditures of public funds. Required of Seniors in Business Administration. Elective for others. Three credits, first term. Associate Professor JOURNEY.

407. Commercial Marketing. This is a study of commercial markets; of the differentiation and integration of market functions; of all types of marketing, such as wholesale, retail, commission, and mail order; and of all market agencies. The course includes a study of advertising and salesmanship and all other facts incident to the merchandising of goods. Required of Seniors in Business Administration, Shop Management, and Agricultural Administration. Three credits, first term. Professor TAYLOR.

408. Labor Problems. This course studies labor problems as a result of the development of the factory system and the wage system. Special problems studied are trade unions, collective bargaining, strikes and lockouts, industrial remuneration, protective labor legislation, methods of promoting industrial peace, child labor, woman labor, unemployment, industrial and trade education, and industrial insurance. Required of Seniors in Shop Management and General Business Administration. Elective for others. Three credits, second term. Professor TAYLOR.

410. Industrial Sociology and Personnel Administration. This is a study of the human factor in industry. It is the purpose of the course to study the principles and best prevailing practices in the field of the administration of human relations in business and industry. It deals with such problems as employment, health and safety, training, personal research, welfare services, and all other

human problems incident to industrial occupations and prevalent in industrial communities. Required of Seniors in Business Administration, Shop Management, Mechanical and Electrical Engineering, and elective for all other Seniors not taking R. O. T. C. Three credits, second term. Professor TAYLOR.

411. Business Statistics. This is a course in business mathematics and statistics. It deals with business problems as they reveal themselves in the great and necessary accumulation of statistical facts. Business forecasting, curve-plotting, and a study of those principles and laws of mathematics, a knowledge of which is necessary to handle big business situations, constitute the major portion of the work of the course. Training and practice will be given in graphing, charting, and other methods of quantitative presentation of business facts. Required of Seniors in General Business Administration, Shop Management and Manufactures, and Agricultural Administration. Three credits, first term. Professor HARBELSON.

412. Accounting II—Advanced Accounting. Prerequisite, Accounting I. Accounts and their relation to accounting statements; apportionment of expenses; depreciation and repairs; closing and opening entries involved in the transfer of a business; apportionment of income and expense; interpretation and managerial use of the revenue statement, controlling accounts, columnar books, partnerships, corporate organization and accounting; cost accounts and types of cost accounting. Required of Seniors in General Business Administration. Three credits, second term. Mr. LANCASTER.

CHEMISTRY

For Four-year Courses

101-102. Inorganic Chemistry. McPherson and Henderson's *Course in General Chemistry.* The common elements and their principal compounds, together with the fundamental principles of the science, are studied by means of lectures and recitations. (*a*) Two credits, both terms. Required of Agricultural Freshmen. (*b*) Three credits, both terms. Required of other Freshmen. Professor WITHERS, Associate Professor RANDOLPH, Assistant Professor JORDAN, Mr. SMITH, Mr. PARKS, and Mr. TRICE.

103-104. Inorganic Chemistry. Laboratory work. McPherson and Henderson's *Exercises in Chemistry.* Here, under the eye of the instructor, experiments illustrating and emphasizing the work of the classroom are performed by the student. One credit, both terms. Required of Agricultural Freshmen. Fee, $2. One credit, both

terms. Required of other Freshmen. Fee, $3. Associate Professor Randolph, Assistant Professor Jordan, Mr. Smith, Mr. Parks, and Mr. Trice.

201. Qualitative Analysis. Tower's *Qualitative Chemical Analysis.* A discussion of the principles involved in chemical analysis, together with laboratory work. The student is given thorough practice in the identification of the more common ions, and in the complete analysis of mixtures of pure salts, commercial products, alloys, and minerals. Three credits, first term. Required of Sophomores in Agriculture and Chemistry. Fee, $2. Mr. Smith.

202. Quantitative Analysis. In this course the student is introduced to the principles involved in titrometric determinations in volumetric quantitative analysis.

The student is taught to make up and standardize solutions to be used in acidimetry and alkalimetry, and also is taught the use of such solutions as potassium permanganate and potassium dichromate in various determinations. Three credits, second term. Required of Sophomores in Chemistry. Fee, $2. Mr. Smith.

204. Organic Chemistry. Chamberlain's *Agricultural Organic Chemistry.* A study of the organic compounds most closely related to Agriculture, followed by a study of the composition of plants and animals; animal food and nutrition; digestion and absorption; metabolism; milk, blood and urine; plant physiology; occurrence and use of important constituents in agricultural plants; animal foods and feeding. Two credits, second term. Required of Agricultural Sophomores. Mr. Smith.

206. Organic Chemistry. Laboratory work to accompany 204. One credit, second term. Required of Agricultural Sophomores. Mr. Smith.

301-302. Organic Chemistry. Stoddard's *Introduction to Organic Chemistry.* A study of the fundamental principles of Organic Chemistry and of the most important organic compounds. Three credits. Required of Juniors in Chemistry and in Textile Chemistry, both terms; Agricultural Chemistry, first term. Professor Withers.

303-304. Organic Chemistry. Laboratory work to accompany course 301-302. Fisher's *Laboratory Manual of Organic Chemistry.* One credit, both terms. Required of Juniors in all Chemical courses. Students in Agricultural Chemistry may take in either Junior or Senior years. Fee, $1. Professor Williams.

305-306. Quantitative Analysis. Smith's *Quantitative Analysis.* Gravimetric and volumetric analysis of pure salts at first, and later of substances of agricultural and industrial importance. Two credits, both terms. Required of Juniors in all Chemical courses. Three credits, first term. Required of Juniors in Veterinary Medicine. Fee, $3. Professor WILLIAMS.

307-308. Electrochemistry. The necessary elements of electricity are reviewed with a consideration of the sources and application of power, primary and storage batteries, dynamos, motors, transformers, types of electric furnace, etc. A careful study of the application and control of electrical energy to chemical processes in the electrothermal and electrochemical aspects. The electrolytic dissociation theory and other fundamental theories and facts of electrolysis. The principles of physical, analytical, and synthetic chemistry involved in electrolysis. The practical application of electrochemistry in the various industries. Three credits, both terms. Required of Juniors in Chemistry. Associate Professor RANDOLPH.

309-310. Electrochemistry. Laboratory work. Practice in the general principles of the subject, including such features as the general manipulation of the electric current to chemical operations, specific resistance of electrolytes, polarization, temperature coefficient of resistance, transference number, conductivity, degree of dissociation, primary cells, storage batteries, electromotive force, single potentials, potentiometric determinations, H-ion determination, electrolytic titration, deposition of metals, electroplating, electrotyping, operations of the electric furnace, synthesis of commercial products, electrometallurgy and refining of metals, etc. One credit, both terms. Required of Juniors in Chemistry. Fee, $2. Associate Professor RANDOLPH.

312. Physiological Chemistry. Matthew's *Physiological Chemistry.* Two credits, second term. Required of Juniors in Veterinary Medicine and Agricultural Chemistry. Elective for Chemical Seniors. Assistant Professor JORDAN.

314. Physiological Chemistry. Laboratory work to accompany course 312. One credit, second term. Fee, $2. Required of Juniors in Veterinary Medicine and Agricultural Chemistry. Elective for Chemical Seniors. Assistant Professor JORDAN.

315-316. Agricultural Analysis. Association of Official Agricultural Chemists, *Methods of Analysis.* Gravimetric and volumetric analysis. Special attention is given to the determination of elements in fertilizers, feed stuffs, and other substances of special interest to

students in Soils. Three credits, both terms. Required of Juniors in Soils. Fee, $2. Professor WILLIAMS.

401. Historical Chemistry. Moore's *History of Chemistry.* Two credits, first term. Required of Seniors in all Chemical courses. Professor WITHERS.

402. Theoretical Chemistry. Two credits, second term. Required of Seniors in all Chemical courses. Professor WITHERS.

403. Microchemical Analysis. Chamot's *Elementary Chemical Microscopy.* A laboratory course in which the common elements are detected by means of the microscope. The student is also taught to identify such fabrics as silk, wool, linen, cotton, etc., and to analyze alloys, soils, fertilizers, and other commercial products for their constituents. One credit, first term. Fee, $1. Elective for Seniors in Chemistry and Agricultural Chemistry. Professor WILLIAMS.

404. Organic Qualitative Analysis. Laboratory course. In this course the students study the methods for detecting the elements in the compounds and the methods for recognizing the radicals and groups characteristic of the various classes of organic compounds. One credit, second term. Fee, $1. Elective for Seniors in Agricultural Chemistry. Professor WILLIAMS.

405-406. Physical Chemistry. The fundamental principles of Physical Chemistry, with a careful consideration of the theories with reference to various branches of chemistry and the application of these theories to practical and industrial processes. Three credits, both terms. Required of Seniors in Chemistry. Associate Professor RANDOLPH.

407-408. Physical Chemistry. Laboratory work. Precision measurements are made of phenomena on which the leading theories of chemistry are based. Extensive experiments are devised and carried out in an effort to determine or to understand some of the important underlying principles upon which physical and chemical relations depend. One credit, both terms. Required of Seniors in Chemistry. Fee, $2. Associate Professor RANDOLPH.

409-410. Quantitative Analysis. Olsen's *Quantitative Analysis.* A continuation of course 305-306. In this course the students analyze minerals, ores, alloys, feed, fertilizer, and other industrial products. Four credits, both terms. Fee, $6. Required of Seniors in Chemistry and Textile Chemistry; elective for Seniors in Agricultural Chemistry. Professor WILLIAMS.

411-412. Organic Chemistry, Advanced. Lecture and laboratory work. In this course the student is required to make special preparations which require reference to the literature, with lectures on the experiments. Prerequisite, Organic Chemistry 303-304. Three credits, both terms. Elective for Seniors in Chemistry and Agricultural Chemistry. Fee, $3. Professor WILLIAMS.

413. Agricultural Physical Chemistry. Getman's *Physical Chemistry.* The general principles of Physical Chemistry are studied with special reference to the phenomena which pertain to agricultural interests, such as the gas laws, photochemistry, osmosis, dialysis, colloids, theory of solutions, chemical equilibrium, available energy, properties of gases, liquids, and solids, and polarization. The laboratory work to accompany this course carries out experiments illustrating the subjects studied in the classroom. Three credits, first term. Required of Seniors in Agricultural Chemistry and Soils. Associate Professor RANDOLPH.

414. Soil Analysis. Association of Official Agricultural Chemists, *Methods of Analysis.* Determination of the chief constituents of soils, with special reference to elements essential to plant food. Analysis of materials used as sources of plant food. Three credits, second term. Required of Seniors in Soils and Agricultural Chemistry. Fee, $2. Professor WILLIAMS.

415-416. Industrial and Engineering Chemistry. Outlines of Industrial Chemistry, with especial attention to growing chemical industries of North Carolina and the South. A careful study of the chemical principles and processes involved in the manufacture of chemical products. Engineering problems of chemical industries. Comparison of efficiency of different types of machinery; sources of power; water supplies; sewage disposal; sanitary problems; causes and prevention of hazards; by-products; recovery of waste products; sources of loss; control analyses in manufacturing operations; reduction of cost; raising standard of quality; reduction of seconds; structural materials; blueprints; specifications for designs of chemical plants; availability and utilization of raw materials; perfecting methods; synthetic production; catalysis; plant management; construction of furnaces; drying; evaporation; distilling; filtering; and other engineering features of industries involving chemical processes. Two credits, both terms. Required of Seniors in all Chemical courses. Associate Professor RANDOLPH.

417-418. Industrial and Engineering Chemistry. Laboratory work. Preparation and purification of typical products on a sufficiently large scale to learn the practical conditions, difficulties, and

economic questions of commercial practice; study of the manipulation and control of industrial processes and apparatus; mechanical drawings of commercial and scientific chemical apparatus, with outline of use and operation; special apparatus designed and built; calorimetry; pyrometry; polarimetry; refractometry; viscosimetry; technical study of structural materials; and various exercises illustrating industrial methods. One credit, both terms. Required of Seniors in all Chemical courses. Fee, $2. Associate Professor RANDOLPH.

For Two-year Course in Agriculture

11-12. Farm Chemistry. Tottingham and Ince's *Chemistry of the Farm and Home.* The following topics will be discussed:

Water and Its Constituent Elements. Distribution, kinds, circulation, purification, physical properties, solution, chemical properties, usefulness, climatic effects; relation to water in soil and to plant and animal life; use in the arts; oxygen, ozone, hydrogen, hydrogen peroxide, symbols, formulas, equations.

The Atmosphere and Its Chief Constituent, Nitrogen. Composition, nitrogen, acids, bases, salts, ammonia, nitric acid.

Some Other Nonmetals. Chlorine, sulphur, phosphorus, carbon, simple organic compounds, silicon.

A Few Important Metals. Occurrence, extraction, sodium, potassium, calcium, copper, magnesium, zinc, iron, aluminum.

The Plant and Its Products. Importance, composition, ash, growth, structure, chemical changes, enzymes, roots, stem, leaf, flower and fruit, nutrition, crops, harvesting, environment, rotation.

The Soil. Origin, formation, soil minerals, humus, pulverizing agents, texture, physical properties, heat-absorbing power, chemical properties, nitrification, retention of fertilizers, alkali soils, analysis.

Fertilizers. Classes, inspection, terms, values, home mixing, soil amendment, application, choice for specific crop systems.

Farm Manure. Importance, source, amount, value, manurial value of feeding stuffs, manure of different animals, urine, losses, spreading, absorbents, preservatives, increasing value, use, effects, green manuring, sewage.

The Animal and Its Products. Parts, composition, nutrition, digestion, respiration, assimilation, excretion, skin, kidneys, products, efficiency.

The Feeding of Animals. Scientific foundation, nature and composition of feeding stuffs, building and fuel value, value of indigestible roughage, productive value of feeding stuffs, nutritive ratio, differ-

ences in food requirement, ash constituents, fuel needs, need of proteins, feeding standards, influence of food, condimental feeding stuffs, feeding-stuff laws.

Dairy Products. Importance, the udder, specific gravity of milk, chemical composition of milk, milk of different animals, milk of different breeds, lactation period, feeding stuffs, gases of milk, decomposition of milk, condensed milk, cream, centrifugal method, butter, rancidity, oleomargarine, overrun, buttermilk, cheese, composition of dairy products, butter and cheese flavors.

Human Food and Dietetics. Dietetic needs, fuel needs, protein needs, foodstuffs, meats, milk, eggs, vegetables, cereals, fruits, ciders, wines, vinegar, cooking, baking, toasting, cooking of vegetables, spices, flavors, beverages, balancing diet, cost of diet, preservation of food, labels, food laws.

Miscellaneous Materials of Importance in Daily Life. Cotton, flax, hemp, wool, silk, dyeing, dyes, cleaning, bleaching, paints and varnishes, cements and mortars, concrete, plaster, insecticides, fungicides, disinfectants.

The laboratory work by each student accompanies the classroom work. Three credits. Required the first year of the two-year Agricultural course. Fee, $2. Assistant Professor JORDAN.

CIVIL ENGINEERING

For Four-year Courses

102. Engineering Lectures. Second term, one credit. Required of Freshmen in Civil Engineering. What is expected of an engineer is pointed out in a broad way by lectures and reading for the purpose of impressing upon the student the importance of thoroughness and systematic preparation for his more specific work which follows the first year. Elementary use of the compass and chain, the level, and the manner of keeping notes are illustrated by a few periods of field work. Professor MANN.

201-202. Materials of Construction. Both terms, one credit. Required of Sophomores in Civil and Architectural Engineering. Study of the properties of building materials, their strength and durability. Methods of preservation, weights, unit stress values; methods of manufacture; cost data. Text-book, Baker, *A Treatise of Masonry Construction.* Associate Professor SHUMAKER.

203-204. Elements of Design. Both terms, one credit. Required of Sophomores in Architectural, Civil, and Textile Engineering. Architectural lettering and conventions. The classic orders of

architecture. Problems in design, composition and planning. Associate Professor SHUMAKER.

205. Descriptive Geometry. First term, two credits. Required of Sophomores in Civil and Architectural Engineering. The point, line, and plane. Generation and classification of lines and surfaces. Surfaces of revolution. Intersections of surfaces by lines and other surfaces. Perspective drawing. Associate Professor SHUMAKER.

206. Surveying, Theoretical. Second term, two credits. Required of Sophomores in Civil Engineering and Architectural Engineering. Study of uses and adjustments of ordinary surveying instruments. Land surveying, traverse lines, leveling, city surveying, topographical surveying. Calculation of areas by latitude and departure stadia methods. Text-book, Breed and Hosmer, *Elementary Surveying*. Assistant Professor WOOTEN.

207-208. Surveying, Field Work. Second term, one credit. Required of Sophomores in Civil Engineering and Architectural Engineering. First term, one credit. Required of Sophomores in Electrical Engineering. Compass and transit surveys of small circuits showing use of surveying instruments and the importance of accuracy in the execution of the work. Land surveys, level lines for establishing permanent bench marks. Assistant Professor WOOTEN.

301. Surveying, Theoretical. First term, two credits. Required of Juniors in Civil Engineering. Triangulations, astronomical observations for azimuth, precise leveling, filling in topographical details, plane table, hydrographic surveying, use of sextant and three-arm protractor. Text-book, Breed and Hosmer, *Higher Surveying*. Assistant Professor WOOTEN.

302. Railroad Engineering. Second term, two credits. Required of Juniors in Civil Engineering. Study of reconnaissance, preliminary, and location surveys for railroads. Mathematics of simple, compound, and reverse curves. Forms of railroad survey notes. Text-book, Searles and Ives's *Field Engineering*.

303. Surveying, Field Work. First term, one credit. Required of Juniors in Civil Engineering. Surveys by azimuth of previously established circuits, checking all distances and calculated bearings and comparing measured distances and azimuths of cross lines on the circuit with calculated azimuths and distances. Assistant Professor WOOTEN.

304. Topographical Surveying. Second term, one credit. Required of Juniors in Civil Engineering. Completed survey of a topo-

graphical circuit, including all notes for platting to be used in Topographical Drawing Course 306, contours and filling in for this circuit being made by stadia and plane table. Use of sextant on a small area purposing to represent soundings, and from these notes a hydrographic map is made in the Topographical Drawing Course 306. Staking out of simple, compound, and reverse railroad curves with transits from calculations made in Railroad Engineering Course 302. Assistant Professor WOOTEN.

306. Topographical Drawing. Second term, one credit. Required of Juniors in Civil Engineering. Conventional signs and lettering. Completion of maps platted by latitude and departures from given survey data. Completed topographical map and completed hydrographic map from students' field notes taken in Surveying Course 304.

307. Highway Engineering. Masonry construction. First term, two credits. Required of all Juniors in Civil Engineering. Methods and costs of constructing foundations, dams, retaining walls, arches, piers, and other masonry structures. Text-book, Baker, *A Treatise on Masonry Construction.* Professor TUCKER.

308. Highway Engineering. Second term, two credits. Required of all Juniors in Civil Engineering. An elementary course in Highway Engineering. A study of the methods and materials used in the construction of county roads and city pavements. Study of road-building materials found in North Carolina. Professor TUCKER.

309. Graphic Statics. First term, one credit. Required of Juniors in Civil and Architectural Engineering. A solution of mechanics' problems by graphical methods, the results being checked by analytical methods to impress the importance of accuracy in the performance of this manner of solutions. Problems using the funicular polygon. Bending moments and shears. Centroids of sections. Resultant pressure on retaining walls. Determination of the stresses caused by dead load, snow load, wind on fixed and free sides in framed structures, maximum and minimum stresses. Lectures and notes.

311. Mechanics. First term, three credits. Required of Juniors in Civil, Architectural, and Textile Engineering. Statics, including concurrent forces, parallel forces, nonconcurrent forces, nonparallel forces and friction. Both graphical and analytical methods are used, with numerous applications to various engineering problems. Text-book, Poorman's *Applied Mechanics.* Professor MANN.

312. Mechanics. Second term, three credits. Required of Juniors in Civil, Architectural, and Textile Engineering. Centroids and center of gravity. Moment of inertia. Elementary mechanics of materials with numerous applications to various engineering problems. Text-book, Poorman's *Applied Mechanics*, and problems. Professor MANN.

401. Roofs and Bridges. First term, three credits. Required of Seniors in Civil and Architectural Engineering. Study of the effects of dead and live loads uniformly distributed and concentrated on framed structures. Calculation by analytical method of stresses due to these loads. Wind and snow load stresses and reactions. Stresses from moving loads on highway bridges. Stresses due to train loads in railway bridges. Complete solution of roof truss and bridge problems. Text-book, Merriman and Jacoby's *Roofs and Bridges*. Professor MANN.

402. Bridge Design. Second term, three credits. Required of Seniors in Civil Engineering. The completed design and drawing of a combination wood and steel roof truss and a Pratt type pin-connected railroad bridge. The loading and specifications are given and the calculations for maximum and minimum stresses are first completed by the student, the parts then designed from which the completed drawings are made. Lectures and notes. Professor MANN.

404. Municipal Engineering. Second term, two credits. Required of Seniors in Civil and Architectural Engineering. Study of sewerage systems. Amount of sewage. Flow in sewers. Manhole and flush tank construction. Disposal systems. Surveys and forms of field notes and manner of calculating data for the design and construction of a sewerage system. Original problems. Inspection of the system of Raleigh and suburbs. Text-book, Folwell's *Sewerage*. Professor MANN.

405. Railroad Surveying. First term, one credit. Required of Seniors in Civil Engineering. Reconnaissance, preliminary, and location surveys for a section of railroad. The located line is cross-sectioned, the earthwork computed, and complete plans and estimates prepared, including a mass diagram. Location of railways and special problems in railroad engineering. Field and drafting room work. Professor TUCKER.

406. Civil Engineering Laboratory. Second term, one credit. Required of Seniors in Civil and Architectural Engineering. Tests of materials of construction, including standard tests of Portland cement, standard tests of bitumens, standard tests of sand and stone,

and the use of sieve analysis; curves; tension and compression tests of steel and concrete; rating and use of the planimeter; rating and use of the current meter; hydraulic measurements.

407. Mechanics of Materials. First term, three credits. Required of Seniors in Civil, Architectural, and Textile Engineering. Study of the working stresses of material, stresses of beams, columns, and shafts; shear and flexure formulas, elastic deflections; rupture of beams; impact. Text-book, Merriman's *Mechanics of Materials.* Professor MANN.

408. Reinforced Concrete. Second term, three credits, required of Seniors in Civil and Textile Engineering; two periods, required of Seniors in Architectural Engineering. Study of the materials, general stress distribution, the derivation of formulas for working loads and for ultimate loads, bonds and shear stresses; design of beams and columns. Numerous original problems are given and required to be solved by the theoretical formulas, and results checked by diagrams and curves. Text-book, Turneaure & Maurer's *Reinforced Concrete.* Professor MANN.

409. Hydraulics. First term, three credits. Required of Seniors in Civil Engineering. A course covering the principles of hydrostatics, pressure, laws governing flow in pipes and conduits, flow through orifices and nozzles and over weirs, and the losses from friction and other sources; methods of measuring the flow of streams; determination of waterpower in streams, and a study of the testing of hydraulic motors. Text-book, Merriman's *Treatise on Hydraulics.* Professor MANN.

410. Hydraulics. Second term, two credits. Required of Seniors in Electrical Engineering. Hydrostatics, hydrokinetics, including the flow of water through orifices, pipes, and open channels. Hydrodynamics, including theory of hydraulic motion and pumps. Hydraulic instruments and measurements. Text-book, Slocum's *Elements of Hydraulics.* Professor MANN.

411. Railroad Engineering. First term, two credits. Required of Seniors in Civil Engineering. Turnouts, spirals, track laying, cross-sections, calculations of earthwork, vertical curves, and general principles of railroad surveying. Text-book, Searles & Ives's *Field Engineering.* Professor TUCKER.

412. Railroad Economics. Second term, two credits. Required of Seniors in Civil Engineering. Economics of railroad location; maintenance of way; recitations and reports on outside reading. Text-book, Crandall & Barnes's *Railroad Construction.* Professor TUCKER.

414. Water Supply. Second term, two credits. Required of Seniors in Civil Engineering. Investigation of water supplies; methods of treatment; a study of the design and construction of filtration and pumping plants; distribution systems; pumping systems; a review of dam constructions; inspection and study of water supply system of the city of Raleigh. Text-book, Folwell's *Water Supply Engineering.* Professor MANN.

413. Mechanics. First term, three credits. Required of Seniors in Civil Engineering. Kinetics, including rectilinear motion, curvilinear motion, rotation, combined oscillation and rotation, work and energy, impulse, momentum and impact, with numerous applications to engineering problems. Text-book, Poorman's *Applied Mechanics.* Professor TUCKER.

416. Astronomy. Second term, two credits. Required of Seniors in Civil Engineering. Study of the celestial sphere and system of coördinates. Special attention is given to those astronomical observations which may be needed in the practice of the surveyor. Observation with engineer's transit for latitude and longitude, time, and azimuths are a required part of the work. Text-book, Hosmer's *Practical Astronomy.* Professor TUCKER.

Highway Engineering

To meet the demand in the State for competent highway engineers, there has been created in the Department of Civil Engineering a new Department of Highway Engineering. The work for the first three years is identical for all students of Civil Engineering, but in the Senior year the student who desires to specialize in Highway Engineering omits certain subjects from the regular Civil Engineering course, and the time thus made available is taken up with special courses in Highway Engineering. The Junior Highway Engineering Courses, 307 and 308, are taken by all regular Civil Engineering students. Senior Highway Surveying (course 405 H), Senior Highway Bridge Design (course 402 H), and the Highway Engineering Laboratory (course 406 H), are taken by those students specializing in Highway Engineering in place of Railroad Engineering (course 411), Railroad Economics (course 412), Railroad Surveying (course 405), Bridge Design (course 402), and Civil Engineering Laboratory (course 406), respectively. These courses are so arranged that the student who specializes in Highway Engineering will, at the same time, receive a well-balanced training along the lines of general Civil Engineering.

Special students who desire to take the Junior and Senior courses in Highway Engineering in one year will be permitted to do so,

provided they have had the proper foundation for the work, and provided they have not the time in which to pursue the regular course in Civil Engineering to graduation. Such students must supplement their work in Highway Engineering by taking other suitable Civil Engineering courses.

402H. Highway Bridge Design. Second term, three credits. Required of all Seniors in Highway Engineering. The complete design of wood, steel, and concrete highway bridges. The loading and specifications are given and the calculations for maximum and minimum stresses made by the student, after which the different members are designed and the drawings completed. Lectures and notes. Professor TUCKER.

405H. Highway Surveying, Field Work. First term, one credit. Required of Seniors specializing in Highway Engineering. Reconnaissance, preliminary, and location survey for a section of road. The located line is cross-sectioned, the earthwork computed, and complete plans and estimates are prepared. Professor TUCKER.

406H. Highway Engineering, Laboratory. Second term, one credit. Required of Seniors specializing in Highway Engineering. The testing of materials used in road building, including sand, clay, cement, and bituminous materials. Professor TUCKER.

411H. Highway Engineering. First term, two credits. Required of Seniors specializing in Highway Engineering. Advanced Highway Engineering. Grades, sections, foundations, drainage, surveys, plans, and estimates. A more extended course than Junior Highway Engineering. Text-book: Harger and Bonney's *Highway Engineer's Handbook*. Professor TUCKER.

412H. Highway Economics. Second term, two credits. Required of Seniors specializing in Highway Engineering. The economics of highway location and construction, with particular reference to methods and costs. Road legislation and the method of financing road building. Highway transportation. Text-book, Blanchard and Drowne, *Highway Engineering*. Professor TUCKER.

ELECTRICAL ENGINEERING

For Four-year Courses

102. Electrical Engineering Lectures. A course introducing the student to general engineering methods, with more stress laid on electrical problems. The student is made familiar with general engineering terms and principles and the materials used in engineering

work, and is given a general review of the field of Electrical Engineering. One credit, second term. Required of Freshmen in Electrical Engineering. Professor Browne, Mr. Pearsall.

201-202. Electrical Practice. The repair of electrical machinery, machine winding, practical methods of locating faults, installation of electrical machinery. This course is planned to make the student familiar with the care and maintenance of electrical apparatus. One credit, both terms. Required of Sophomores in Electrical Engineering. Mr. Pearsall.

301-302. Elements of Electrical Engineering. A thorough study is made of the production of electric currents, beginning with the theory of the magnetic circuit, the electric circuit, electromagnetic induction, construction of dynamos and motors, elementary alternating currents. Three credits, both terms. Required of Juniors in Electrical Engineering and Seniors in Textile Engineering. Elective for Juniors in Civil Engineering. Prerequisites, Physics 201-202. Professor Browne, Professor McIntyre.

303-304. Electrical Engineering. An introductory course for students in other engineering departments, consisting of the study of the principles involved in the production, distribution, and utilization of electrical power. Required of Juniors in Mechanical Engineering. Two credits, both terms. Prerequisites, Physics 201-202. Assistant Professor Cox.

305-306. Electrical Engineering Laboratory. This study accompanies Subjects 301-302. It includes use of standard apparatus, elementary alternating current experiments, electric and magnetic measurements, the operation and testing of generators and motors. Two credits, both terms. Fee, $2. Required of Juniors in Electrical Engineering and Seniors in Textile Engineering. Elective for Juniors in Civil Engineering. Prerequisites, Physics 201-202 and Physics 203-204. Professor McIntyre, Assistant Professor Cox, Mr. Pearsall.

307-308. Electrical Engineering Laboratory. A course to accompany Subjects 303-304. Instruction is given in the care and operation of direct and alternating current machinery. One credit, both terms. Fee, $1. Prerequisites, Physics 201-202 and Physics 203-204. Professor McIntyre, Assistant Professor Cox, Mr. Pearsall.

309-310. Electric Motors. The elementary laws of electric currents, principles, construction, operation, and care of electrical machinery, electric lamps and illumination. A study of the use of electrical machinery in factories, with special reference to textile mills. Two credits, both terms. Required of Juniors in Textile Manufacturing. Mr. Pearsall.

401-402. Alternating Currents and Machinery. A study of the flow of periodic currents in circuits containing resistance, inductance, and capacity; the construction, operation, and performance of alternating current machinery. Three credits, both terms. Required of Seniors in Electrical Engineering; elective for Seniors in Civil Engineering. Prerequisites, Subjects 301-302. Professor BROWNE.

403. Electrical Communication. A study of the systems employed in the transmission of intelligence by means of electrical methods. Morse telegraph circuits. Theory and practice of telephony. Manual and automatic telephone systems. Telephone transmission over lines and cables. Simultaneous telegraphy and telephony. Radio telegraphy and telephony. Railway signaling systems. Miscellaneous systems of communication. Three credits, second term. Required of Seniors in Electrical Engineering. Professor MCINTYRE.

404. Electrochemistry. A study of the ion theory, and of electrochemical applications. Some of the applications studied are electroplating; electrochemical refining of metals; manufacture of a few typical products; design, control, and typical products of electric furnaces; fixation of atmospheric nitrogen. Three credits, second term. Required of Seniors in Electrical Engineering. Prerequisites, Electrical Engineering 301-302. Professor MCINTYRE.

405-406. Electrical Transmission and Distribution for Lighting and Power. A study of low-potential systems of distribution, lighting systems, electric lines, interior illumination, street lighting, electric drive in mill and factory, electric traction, hydroelectric development, high-tension transmission, calculation of high-tension lines. Two credits, both terms. Required of Seniors in Electrical Engineering. Prerequisites 301, 302, 305, 306. Professor BROWNE.

407-408. General Electrical Engineering Laboratory. This study is taken up simultaneously with the study of alternating currents. It includes practice and calculations on alternating currents, circuits, electrical measurements, and calibration of instruments, experimental study of transformers, alternating current generators and motors, advanced methods of testing electrical apparatus, and shop testing. Three credits, first term; two credits, second term. Fee, $3. Required of Seniors in Electrical Engineering. Prerequisites, Subjects 301-302 and 305-306. Professor MCINTYRE, Assistant Professor COX, Mr. PEARSALL.

409-410. Design and Calculation. A course in which electrical problems of all kinds are studied. This includes the calculation of circuits, the performance of machines, the design of simple electrical

apparatus, transmission lines, problems of control of electrical apparatus, and in lighting and illumination. One credit, both terms. Required of Seniors in Electrical Engineering. Prerequisites, 301-302. Professor BROWNE.

ENGLISH

For Four-year Courses

For use in English throughout the College course every student needs a fountain pen, a loose-leaf notebook for sheets eight by eleven inches, with rings six inches apart, and a dictionary as large at least as the Desk Standard or Webster's Collegiate Dictionary. Those who have or can afford typewriters are advised to use them.

101-102. Composition and Rhetoric. Special attention is given the mechanics of writing, the construction of paragraphs, and the planning of oral and written reports of moderate length on scientific or current topics. Frequent themes and short oral reports are required, many of them involving the use of reference books in the College library. Required of Freshmen and of Second Year Short Course Students in Mechanic Arts, and Textile Manufacturing. Three credits, both terms. Assistant Professor WILSON, Mr. KEEBLE, Mr. BAKER, Mr. CHAPPELL.

201-202. American Literature and Public Speaking. The work in Literature consists of the reading and analysis of the works of American writers in prose and verse, with frequent oral and written reports on the required reading. During the first term about a third of the time is given to public speaking, which is taught by text-book and lectures, with analysis of published speeches and with exercises in the composition and delivery of arguments, expository speeches, and orations. During the last three months of the second term about two-thirds of the student's time is given to public speaking and parliamentary procedure. Three credits, both terms. Prerequisite, English 101-102. Required of Sophomores. Professor SUMMEY, Assistant Professor WILSON, Mr. KEEBLE, Mr. BAKER.

301. Technical Essays. The main purpose in this work is to study the principles of technical writing as applied by standard scientific writers. Parallel reading and the writing of technical papers are continued. Three credits, first term. Required of all Juniors, except those in Agriculture, in Business Administration, in Shop Management, and in Textile Engineering. Professor HARRISON, Professor SUMMEY.

302. Technical Writing. The principles of composition, as applied in engineering reports, formal theses, and monographs are

presented in a text-book and practiced in several papers and exercises. One thesis is written by each student. Three credits, second term. Required of all Juniors except those in Agriculture and in Textile Engineering. Professor HARRISON, Professor SUMMEY.

303-304. Journalism and Correspondence, I and II. The work begins with a rapid review of the essentials of writing, with special attention to grouping in sentence and paragraph, emphasis and subordination, clear and informal transition, straightforward progress of composition, and the clarifying and lightening of style. Attention is then directed to the planning, the composition, and the mechanics of business letters, sales letters and circulars, and advertisements. Assignments also include news stories, publicity matter, feature stories, editorials, and a thesis or bulletin. Instruction is incidentally given in punctuation and capitalization, the use of italic and boldface, captions, tabulation, the use of cuts and figures, and other matters of typography and make-up. Three credits, both terms. Required of Juniors in Business Administration and Shop Management; elective (one term or both terms) for Agricultural Juniors. Professor SUMMEY.

401. Classics. The lives and works of scientists and of other writers, particularly of the nineteenth century, are studied in this course. Essays will form an important part of the work. Prerequisite, 301-302. Three credits, first term. Open to Seniors. Professor HARRISON.

402. Journals. To give practical knowledge of technical and of other standard journals is the purpose of this course. The essays required are mainly of scientific and technical character. Prerequisite, 301-302 and 401. Three credits, second term. Open to Seniors. Professor HARRISON.

English for Short Courses

This is a thoroughly practical course in the elements of grammar and in composition, especially spelling, sentence and paragraph structure, and letter writing. Some reading is done in class, and supplementary reading is assigned for private study. Three credits, both terms. Required of all First Year Short Course students. Mr. BAKER, Mr. CHAPPELL.

FARM CROPS AND FARM MANAGEMENT

For Four-year Courses

102. General Farm Crops. A course covering the essentials of the leading cereals, legumes, and grasses in North Carolina, with special reference to their adaptation, culture, improvement, harvest-

ing, and use. Practice in the study of growing and dried crops in the field and laboratory, including the selection and germination of seed corn and small grains, the identification of important legumes and grasses, including their seeds. Prerequisite, Botany 101. Three credits, second term. Required of Freshmen. Professor DARST.

301. Cereal Crops. Lectures and recitations on the history, production, cultivation, improvement, harvesting, storage, and marketing of corn, wheat, oats, rye, barley, etc. Practice in selecting, judging, and testing of corn and small grains. A study of the growing and dried crops and their products in the field and laboratory. Prerequisite, Botany 101 and 102. Three credits, first term. Required of Juniors in Farm Crops and Veterinary Medicine. Elective for other Juniors in Agriculture. Professor DARST.

302. Legumes and Grasses. Lectures and recitations on the history, adaptation, use, production, cultivation, and marketing of legumes and grasses. Practice in the study and identification of forage plants and their seeds, using growing and dried specimens in the field and laboratory. Prerequisite, Botany 101 and 102. Three credits, second term. Required of Juniors in Farm Crops, General Agriculture, and Animal Husbandry. Elective for other Juniors. Professor DARST.

303. Farm Cost Accounting. The use of farm inventories, single enterprise accounts, complete farm accounts, and other farm records. Special emphasis is given to interpretation of results and their application in the organization and management of the farm. Three credits, first term. Required of Juniors in Farm Crops, General Agriculture, Rural Life, Agricultural Administration, and Vocational Education. Elective for other Juniors. Mr. D. B. WILSON.

402. Farm Management. Lectures and recitations on farming as a business; types of farming, balance of business, size of business, rates of production, farm layout, building arrangement, labor management, machinery, marketing, ways of starting farming, forms of tenure and leases, choosing and buying a farm, use of capital and credit, planning, organization and management of specific farms. Prerequisites, Economics 301-302 and Farm Management 303. Three credits, second term. Required of all Seniors in Agriculture except those in Veterinary Medicine and Agricultural Chemistry. Mr. D. B. WILSON.

403. Cotton and Tobacco. History, distribution, and uses of cotton. A study of the types and varieties of cotton, the soil and climatic requirements, soil preparation, fertilization, cultivation, har-

vesting, classing, and marketing. The study of tobacco includes th history, distribution, types and varieties, seed selection, plant beds soil preparation and fertilization, cultivation, topping, suckering harvesting, curing, and marketing. Practice consists of the study o varieties, lint and market grades of cotton. Considerable practic will be given in the sampling and classing of cotton. A study o varieties, quality, and market requirements of tobacco. Three credits first term. Required of Seniors in General Agriculture and Farm Crops; elective for other Seniors except those in Veterinary Medicine and Agricultural Chemistry. Professor DARST.

404. Types of Farming in North Carolina and United States. A study of the types and methods of farming best adapted to different sections of North Carolina and the United States, and of the natural and economic conditions that make these types best. Accompanied or preceded by Farm Management 402. Two credits, second term. Elective for all Seniors in Agriculture except Veterinary students. Mr. D. B. WILSON.

405. Advanced Farm Crops. Lectures and assignments on agricultural experimental methods; variety, description, and identification; advanced grain judging, and the study of the Federal Grain Standards Act. Practice consists of the study and laying out of experimental plats, the identification of crop varieties; grain judging, and practice in determining market grades of grain. Prerequisite, Farm Crops 302 and 301. Three credits, first term. Required of Seniors in Farm Crops. Elective for all other Seniors in Agriculture except those in Agricultural Chemistry and Veterinary Medicine. Professor DARST.

406. Crop Improvement. A study of the varieties of farm crops; their variation and improvement. The principles and practice of breeding as applied to the improvement of farm crops. Practice in methods of selection and hybridization, including field tests of corn, cotton, wheat, oats, tobacco, soybeans, cowpeas, velvet beans, etc. A portion of the College farm is utilized for the exclusive use of men taking this course. Prerequisite, Farm Crops 302 and 301. Three credits, second term. Required of Seniors in Farm Crops. Elective for all other Seniors in Agriculture except those in Agricultural Chemistry and Veterinary Medicine. Professor DARST.

408. Cotton Classing. A practical course in the grading and stapling of cotton. The United States official standards for grade and staple are used in the study and in the classing of a large number of samples. The object of the course is to train men to class cotton. An expert cotton classer will be in charge of this course. Prerequi-

site, Farm Crops 403. Three credits, second term. Elective for all Seniors in Agriculture except those in Agricultural Chemistry and Veterinary Medicine.

501-502. Graduate Courses. The following courses are offered: (*a*) Corn, small grain; (*b*) cotton, tobacco; (*c*) pastures, meadows, hay and forage; (*d*) legumes, green manuring and cover crops; (*e*) rotations, weeds; (*f*) crop breeding, seed production; (*g*) field crop experiments. Four credits. Professor DARST.

For Two-year Course

11. Corn and the Small Grains. The classification, adaptation, culture, harvesting, marketing, and uses of corn and the small grains. Some of the phases of the culture of these crops included in the course are soil regional adaptation, preparation of the soil, fertilization, seeding, harvesting; varieties, seed selection and improvement; and rotations. Three credits, first term, first year. Professor DARST.

12. Legumes: Clovers, Soybeans, Cowpeas, Velvet Beans, and Peanuts; Cotton. Cultural practices from soil preparation to harvest; inoculation; varieties, their adaptation and improvement; uses for seed and forage. Special prominence is given to the place of these crops in the rotation, and their relation to permanent soil fertility. Three credits, second term, first year. Professor DARST.

22. Farm Management. Discussions on the qualifications of farmers; choosing a farm; the advantages and disadvantages of different types of farms and some of the factors determining types; farm organization, the amount and kinds of equipment, the arrangements of fields, buildings, fences, roadways, etc.; farm labor, tenantry, cropping and feeding systems. Practice will be given in planning cropping systems, laying out farms, and solving farm problems. Three credits, second term, second year. Mr. D. B. WILSON.

For Winter Course

Crops Accessory to Staple Crops for Use on the Farm. (*a*) For the improvement of the soil; (*b*) for distribution of labor.

There are a large number of crops adapted to the soil and climate of North Carolina that deserve more attention than has been given them. These minor crops may be grown profitably in association with the crops now employed as staple crops, and with a minimum increase in equipment and labor. The appropriate selection and adjustment of these crops to established systems of farming is one of the surest means by which farming in 1921 may be made more profitable. This

course covers the selection of crops for the different sections of the State, their culture and uses, and their adjustment to present farm plans.

How to Grow, Cure, and Preserve Hay and Forage. Cheaply produced, home-grown animal food is one of the very serious farm problems of the day. While North Carolina is exceptionally well adapted to the production of such crops, the farmers of the State have not, as a rule, given this phase of their business the attention it deserves. This course will be devoted exclusively to the many crops that may be profitably grown for hay and forage and to the comparative advantage of these different crops not only as feeds, but as crops that will fit in and strengthen the different farming systems of the State. The prime object of the course will be to show how an abundance of high quality hay and forage may be cheaply produced. Professor Darst and Mr. D. B. Wilson.

FARM PRACTICES

For Four-year Courses

401. Farm Practices. This course has been designed for agricultural students with the idea of familiarizing and discussing with them briefly some of the opportunities in different types of farming in the State, and to give them some idea of the best farm practices to be followed by North Carolina farmers. The course will be based upon carefully conducted investigations and observations made under North Carolina conditions. Such matters as methods to use for most economic production and for the proper use of farming lands will be taken up. The course will consist of lectures, reference work, assigned topics, and discussions. One credit, first term. Required of all Seniors in Agriculture except students in Veterinary Medicine and Agricultural Chemistry. Dean Williams.

HORTICULTURE

For Four-year Courses

201. Plant Propagation. Principles and methods of propagating plants, and nursery practice. Three credits, first term. Fee, $1. Required of Sophomores. Mr. Miller.

301. Pomology. The commercial production of the tree and vine fruits. Subjects treated are those in connection with the establishment and management of orchard areas, and the picking, grading, packing, and storing of fruit. Three credits, first term. Required of Juniors in Horticulture. Mr. Miller.

302. Pruning and Spraying. A continuation of Horticulture 301, in which special attention is paid to principles and methods of training fruit trees and vines, and approved practices employed in protecting them from insect pests and diseases. Methods of protection from frost are also considered. Prerequisite, Horticulture 301. Fee, $1. Three credits, second term. Required of Juniors in Horticulture. Mr. MILLER.

303. Farm Forestry. Principles and practices of forestry as applied to the farm woodlot. Practice work includes observations of woodland areas, and actual work of mensuration of a sample acre, together with formation of plans for its maintenance and improvement. Three credits, first term. Required of Juniors in Horticulture. Elective for other Juniors in Agriculture. Professor PILLSBURY.

304. Vegetable Gardening. The principles of vegetable crop production. The home garden and the trucking industry receive special consideration. Practice work is almost wholly carried on in the greenhouse, the hotbed, and coldframe yard, and among the student gardens which the students are required to plan, plant, and maintain throughout the duration of the course. Three credits, second term. Required of Juniors in Horticulture and General Agriculture. Elective for other Juniors. Fee, $1. Mr. MILLER.

305. Fruit Growing. Fruit production for the general farm. Emphasis will be placed upon the problems of establishing the farm orchard, vineyard, and small fruit plot, of management with respect to tillage, cover crops, fertilization, pruning and spraying. Grading and packing fruit will also be included. Three credits, first term. Elective for all Juniors in Agriculture. Fee, $1. Mr. MILLER.

401. Vegetable Forcing. Consists principally in the growing of vegetable crops under glass, but also includes study of glass-house construction and general management. Prerequisite, Horticulture 304. Three credits, first term. Required of Seniors in Horticulture. Mr. MILLER.

402. Landscape Gardening. A study of the principles of the arts of design and their application in the improvement of the farmstead, the rural school grounds, and other similar problems. Civic art as adapted to rural improvement is also treated. Practice in surveying, mapping, designing, and as much of execution of important parts of plans as is practicable is required. Three credits, second term. Required of Seniors in Horticulture and General Agriculture. Elective for all other Seniors in Agriculture. Professor PILLSBURY.

403. Systematic Pomology. A course which combines both study and practice in the description, identification, classification, and judging of fruits. Prerequisite, Horticulture 301-2. Three credits, first term. Required of Seniors in Horticulture. Professor PILLSBURY.

404. Horticultural Seminar. Here the student is allowed to elect and to pursue the study of some special problem in Horticulture. Three credits, second term. Required of Seniors in Horticulture. Professor PILLSBURY.

405. Plant Breeding. A course of study of the principles of genetics as applied to plants. Practice work includes collection of variations, measurement, and study of variability of farm and horticultural crops, technique of cross-pollination, planning of a breeding plat. Biometrical problems constitute an important part of the course. Three credits, first term. Elective for Seniors in Agriculture. Professor PILLSBURY.

406. Small Fruits. A study of commercial-scale production of the strawberry, the dewberry, and other small fruits. Prerequisite, Horticulture 301-2. Three credits, second term. Elective for Seniors in Agriculture. Mr. MILLER.

For Two-year Course

12. Vegetable Growing. Vegetable gardening for the farm, including frame and hotbed making and management, growing early vegetable plants, transplanting, potting, setting out, and cultivation. Each student is required to plan, plant, and care for a garden plat. Three credits, first year, second term. Mr. YOUNG.

21. Fruit Growing. Treats of the growing of fruit on the farm. Practice in selection of sites and soils, choice of varieties, planning and laying out orchards, handling and planting trees, intercropping and fertilization of orchards, and in the grading and packing of fruit is required. Three credits, second year, first term. Mr. YOUNG.

22. Pruning and Spraying. A course which consists largely in practice in spraying and training fruit plants of all kinds. Fee of $1 charged in order to defray partial cost of pruning shears given each student. Three credits, second year, second term. Mr. YOUNG.

For Winter Course

Fruit Growing. A course in which the problems involved in the establishment and management of orchards in North Carolina will be dealt with from the practical standpoint. Practice will consist of work in the propagation, pruning, and spraying of fruit plants.

Vegetable Gardening. In this course particular emphasis will be laid upon the "all-the-year-round" garden. Seeding, cultural, and harvesting problems in connection with the most important crops will be discussed as fully as possible. Practice will consist of work in garden planning and in the raising of seedlings in the greenhouse and frame, transplanting, and the management of growing crops.

MATHEMATICS

While the subject of mathematics is presented in such a manner that the student obtains a thorough working knowledge of those principles which he needs in his Engineering Course, yet it is not the purpose to subordinate the general theory of mathematics to the practical side. The work consists of recitations, written exercises, and lectures, with frequent oral and written quizzes.

For Four-year Courses

101 (a) Agricultural Mathematics. This course consists of elementary Geometry, Trigonometry, and Conic Sections, with their practical applications to Agricultural Science. Three periods, first term. Required of Agricultural Freshmen. Professors YATES and HARRELSON, Assistant Professor MOCK.

101(b). Algebra. This course begins with quadratic equations and completes summation of series, embracing ratio and proportion, variation, the progressions, the binomial theorem, undetermined coefficients, logarithms, compound interest and annuities, permutations, combinations, and continued fractions. Five credits, first term. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanic Arts students. Prerequisite, entrance requirements. Assistant Professor MOCK, Mr. WILLIAMS, Mr. LEROY, Mr. BUCKNER, Mr. EVANS.

102. Advanced Algebra. Well's *New Higher Algebra.* The general theory of equations, the solution of higher equations, determinants, etc. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanic Arts students. One credit, second term. Assistant Professor MOCK, Mr. WILLIAMS, Mr. LEROY, Mr. BUCKNER, Mr. EVANS.

104. Solid Geometry. Wentworth and Smith's *Plane and Solid Geometry.* This course begins with and completes Solid Geometry, including numerous original exercises. Four credits, second term. Required of Engineering, Chemical, and Textile Freshmen and second-year Mechanic Arts students. Assistant Professor MOCK, Mr. WILLIAMS, Mr. LEROY, Mr. BUCKNER, Mr. EVANS.

201. Trigonometry. Plane Trigonometry. Definitions of the trigonometric functions; derivation of formulæ, with their application. Solution of plane triangles, etc. Spherical Trigonometry. Solution of spherical triangles. This course includes the solution of many practical problems. Required of Sophomores in Engineering, Chemical, and Textile Courses. Five credits, first term. Professor YATES, Professor HARRELSON, Assistant Professor MOCK, Mr. WILLIAMS, Mr. BUCKNER.

202. Analytical Geometry. Nichols's *Analytic Geometry.* Loci of equations, straight line, circle, parabola, ellipse, hyperbola, a discussion of the general equation of the second degree, higher plane curves, and geometry of three dimensions. Required of Sophomores in Engineering and Chemical Courses. Five credits, second term. Professor YATES, Professor HARRELSON, Assistant Professor MOCK, Mr. WILLIAMS, Mr. BUCKNER.

301-302. Differential and Integral Calculus. Osborne's *Differential and Integral Calculus.* A thorough treatment of the fundamental principles and derivations of formulæ; applications to various problems, such as expansion into series, evaluation of indeterminate forms, maxima and minima, radius and curvature, lengths of curves, areas, volumes, etc. Four credits, first and second terms. Required of Juniors in Engineering. Elective for Seniors in Chemistry. Professor YATES, Professor HARRELSON.

For Short Courses

11. Algebra. A thorough treatment of elementary Algebra, beginning with fractions and embracing simple equations, simultaneous equations in two or more unknowns, problem solving, involution, evolution, theory of exponents, and radicals. Required of first-year students in Auto-Mechanics, Mechanic Arts, and Textile Manufacturing. First term, five credits. Mr. WILLIAMS, Mr. EVANS.

12. Plane Geometry. A complete course in plane geometry, including numerous original exercises. Required of first-year students in Auto-Mechanics, Mechanic Arts, and Textile Manufacturing. Five credits, second term. Mr. WILLIAMS, Mr. EVANS.

31-32. Farm Mathematics. In teaching this course, problems for solution will be of the nature of those coming up daily on the average farm, such as calculating the plant food contained in and removed by different crops when fed and when sold directly from the farm; fertilizer formulas for different crops using different classes of materials; rations with different kinds of feed and for different kinds of animals, engaged in different kinds of work; capacity of different size of bins for different kinds of grain; bills of material

for different classes of farm buildings; speed of pulleys; draft of farm implements of different kinds; size of drainage tile for different conditions; capacity of cisterns and silos; quantity of different materials needed for preserving different kinds and amounts of meats; measure of hay in the barn or stack; amounts of concrete, sand, and gravel needed to construct walls or floors of different kinds; number of feet of lumber woodlands of different kinds will yield; and thousands of other practical farm problems the thoughtful farmer has to work out. Three credits, first and second terms. Required of first-year students in the two-year Practical Agricultural course. Mr. LeRoy.

MECHANICAL ENGINEERING

For Four-year Course

102. Engineering Lectures. A series of lectures intended to acquaint students with general engineering terms and principles; also with materials used in engineering work, such as lumber, iron, steel, copper, brass, cement, coal, and other materials. Lantern slides are used wherever possible. One credit, second term. Required of Freshmen in Chemistry and in Mechanical Engineering. Professor Vaughan and assistants.

103. Mechanical Drawing. Instruction is given in the drawing of objects, such as models and simple machine parts. The mechanical sketches are made on cross-section paper to scale, without the use of instruments, the work being done with pencil and scale. The method of and reason for representing an object by the three views is taught, as well as the practice in training the hand and the eye to represent form and proportion. All drawings are made in orthographic projection, dimensioned and lettered. Emphasis is placed on free-hand lettering. One credit, first term. Required of Freshmen in Chemistry and in all Engineering and Textile courses. Mr. T. J. Martin and Mr. H. A. Martin.

104. Mechanical Drawing. The work in this course includes instruction in the care of instruments as well as how to properly use them in the making of drawings of models and simple machine parts. Instruction in this course also covers tracing and blueprinting. Two credits, second term. Required of Freshmen in Chemistry and in all Engineering and Textile courses. Mr. T. J. Martin and Mr. H. A. Martin.

Note.—Each student will be required to furnish at his own expense the following outfit: Text-book, drawing board 23 by 31 inches, 30-inch T-square, 9-inch 30°-60° triangle, 7-inch 45° triangle, 12-inch

triangular scale, 4H pencil, H or F pencil, erasers for pencil and ink, penholder with points, pencil sharpener; instrument set, consisting of 6-inch compass with pen, pencil, and lengthening bar, 5½-inch dividers with hair spring adjustment, 3-inch bow dividers, 3-inch bow pencil, 3-inch bow pen, 5½-inch ruling pen. This outfit, of proper quality, will cost about $25. To insure uniform grade of instruments and supplies, the department keeps for sale all of the above at practically cost. This does not mean that they may not be purchased elsewhere, but in case they are they must be approved by the Department.

105. Wood Shop Work. Instruction is given in elementary bench work involving the use of the common hand tools, such as saws, planes, squares, chisels, etc., in the making of formal exercises suited to the tool processes and demonstrating the various types of construction. All exercises are made from blue-prints or sketches, and accuracy is given a prominent place in the requirements. Lectures, demonstrations, and individual instruction are all employed in teaching this subject. Due regard is given to the initiative of the student. Lectures are given upon the history and traditions of tools and woodworking industries, tying the course up with the specific needs of the engineer. One credit, first term. Required of Freshmen in Chemistry and in Mechanical, Electrical, and Civil Engineering. Mr. Busby.

106. Wood Shop Work. The second term continues the principles outlined in the first term as applied to lathes and wood-working machinery, and includes pattern making and foundry practice. In wood turning, problems are assigned involving the use of all of the turner's tools. Work between centers, face plate and chuck work, polishing, and finishing are all done on the lathes. Opportunity is given for working out designs or inventions related to the work. In the instruction on woodworking machinery all of the common woodworking machines, such as band, jig, and circular saws, surfacers, jointers, shapers, mortisers, molders, and sanders are used. The care as well as the use of the machines is taught. Quantity production and cost-finding systems are used when possible. Simple patterns are made on the machines and used in foundry practice. The foundry practice includes the use of the general foundry equipment and tools. Elementary practice in bench molding and core making, melting and casting. Prerequisite, Mechanical Engineering 105. One credit, second term. Required of Freshmen in Chemistry and in Mechanical, Electrical, and Civil Engineering. Mr. Busby and Mr. Worth.

201-202. Descriptive Geometry. The first term is taken up with instruction in representing on a flat surface geometrical magnitudes,

points, lines, surfaces and solids, and the solution of problems relating to them. A practice period follows each hour of instruction. In the second term the work will be the application of the principles of Descriptive Geometry to the actual design of pieces of machinery. Prerequisites, Mechanical Engineering 103-104. One credit, first term; two credits, second term. Required of Sophomores in Mechanical and Electrical Engineering. Assistant Professor CLOYD.

203. Foundry Work and Pattern Making. Recitations and exercises in foundry work, including selection and working condition of sand; use and care of tools and machines; floor, bench, machine molding, and core making; mixing cast iron and alloys; management of cupola and brass furnace in iron and brass melting; making castings for special machines, general repairs and machine shop work; relation and merits of a variety of tools and materials used in foundry practice. A study of pattern making in its relation to molding; the practical construction of patterns to prevent warping and twisting; the making of special patterns; also patterns for different machines, such as drill presses, lathes, jointers, etc.; cores and core boxes; introducing draft, shrinkage, finish, and the appliances and usage of modern pattern work. The relation between pattern making and foundry practice is emphasized, and all problems are solved with this in view. Required of Sophomores in Mechanical Engineering. One credit, first term. Prerequisite, Woodwork 105-106. Mr. WORTH.

204. Forge Shop Work. This course includes instruction on the treatment of iron and steel, the use of punches, swages, fullers and set-hammers, and hand tools. Exercises in drawing, upsetting, forming; scarf, jump, butt, and cleft welding; making of forge and machine shop tools from blue-prints; hardening and tempering, annealing, carbonizing, and case hardening; selection of tool steels. Special work on equipment and repairs about the College shops and laboratories. One credit, second term. Required of Sophomores in Mechanical Engineering. Mr. G. W. PRICE.

205-206. Metallurgy. A general study of the ferrous and non-ferrous metals and their alloys. Classification of the metals as adapted for special purposes. The application of chemistry and physics to the extraction and refining of the common metals. Stress is laid upon the general characteristics of the metals as to their melting temperatures, physical properties, the effects of chill and annealing, etc. Study and classification of furnaces, as to fuel, melting, refining, etc. Two credits, both terms. Required of Sophomores in Mechanical Engineering. Prerequisites, Physics, 101-102. Chemistry, 101-102. Mr. WORTH.

208. Mechanical Drawing. This course is a continuation of the work done in Mechanical Engineering 104. Freehand sketches are made of models and actual parts of machines. From these sketches complete working drawings are made without further reference to the original model. Toward the end of the term the design of elementary cams and other elementary mechanism is given. One credit, second term. Required of Sophomores in Textile Manufacturing. Prerequisite, Mechanical Engineering 103-104. Assistant Professor CLOYD.

301-302. Heat Engines. Nature and measurement of the units of heat, work, and power as used in steam engineering. A study of the properties of steam; use of the "Steam Tables" for solving problems; the theory of steam calorimeters, mechanical mixtures, and combustion of fuels; the application of the above to boilers for the purpose of determining rating, capacity, and efficiency; the functions of the various boiler auxiliaries; elementary thermodynamics as applied to the steam and gas engine cycles; valves, valve gears, and governors of steam engines; determination of indicated and brake horse-power and efficiency of engines for given conditions. Steam turbines and gas engines are studied briefly. Three credits, both terms. Required of Juniors in Mechanical, Electrical, and Textile Engineering. Prerequisites, Physics 201 and 202. Professor VAUGHAN and Associate Professor DANA.

303-304. Mechanism. An analysis of motions and forms of machines. Among the subjects discussed are instantaneous centers, kinematic chains, velocity diagrams, parallel and straight line motions, cams, gearing, worms and worm wheels, belting and intermittent motions. The solution of a large number of practical problems by both graphical and mathemathical methods is required. A study of materials used in machine construction; analysis of stresses in machine parts; design of machine parts, considering them as compression, tension, or torsion members; modification of the above to suit practice and for the sake of general appearance. Design of simple machines, such as shears, punches, power pumps, etc., all calculations to be made in standard form and handed in with the assigned problems. Two credits, both terms. Required of Juniors in Mechanical Engineering. Elective for Juniors or Seniors in Electrical Engineering. Prerequisite, Mechanical Engineering 202. Assistant Professor FOSTER.

305-306. Machine Shop Work. Instruction in this course covers bench work, exercises in chipping and filing, as well as exercises in lathe work, boring, reaming, drilling, planing, milling, and shaping. One credit, both terms. Prerequisite, Mechanical Engi-

eering 203 and Mechanical Engineering 204. Required of Juniors n Mechanical Engineering. Elective for Juniors in Electrical Engieering. Mr. PARK.

307-308. Mechanical Engineering Laboratory. The work consists largely of calibrating and becoming familiar with the various instruments used in engineering testing. Practice in the use of calorimeters, both steam and fuel, and the operation of apparatus used n determining the products of combustion in a furnace. Determing the relation between pressure and temperature of steam; the low of steam through orifices, etc. Practice in the use of indicators nd planimeters for the purpose of determining the indicated horseower of steam and gas engines. The operation of injectors and umps for the purpose of determining their duty. Testing of lubriants for flash, burning, chill point, and viscosity. Study and operaion of lubricators and lubricating systems. One credit, both terms. Required of Juniors in Mechanical and Textile Engineering. Prerequisites, Physics 201-202, and Mechanical Engineering 203-204. Associate Professor DANA and Mr. WORTH.

309. Applied Mechanics. Prerequisites, Analytical Geometry nd Trigonometry. Text, Poorman's *Applied Mechanics*. The applination of the principles of statics to the solution of engineering probems. Both graphical and algebraic methods are used in dealing ith concurrent forces, parallel forces, nonconcurrent and nonparallel orces. Two credits, first term. Required of Juniors in Electrical nd Mechanical Engineering. Assistant Professor FOSTER.

310. Applied Mechanics. Text, Poorman's *Applied Mechanics*. his is a continuation of the first term work, centroids and center of ravity, friction, and moment of inertia being the subjects studied. wo credits, second term. Required of Juniors in Electrical and lechanical Engineering. Assistant Professor FOSTER.

401-402. Power Plants. A study of fuels and combustion; eam boilers; smoke prevention; superheaters and superheated eam; coal and ash handling apparatus; mechanical draft. A comarative study of steam engines; efficiencies; heat losses; influence condensing and superheating; costs. A study of the elementary eory; efficiency and economy of the steam turbine; types, functions, d operation of condensers, feed-water heaters and purifiers, pumps, parators, traps, and drains. A study of piping and pipe fittings. ttention is also given to cost of power and to specifications for power ant equipment. Three credits, both terms. Required of Mechani- l and Textile Engineering Seniors. Elective for Seniors in Chemtry. Prerequisite, Mechanical Engineering 301 and 302. Professor AUGHAN.

403. Gas Engines. Thermodynamics of the gas engine, theoretical comparisons of various types of internal combustion engines Combustion, including combining weights and volumes, heating value air required, etc. Gas engine fuels; solid, liquid, and gas. Gas producers, carburetors, and vaporizers. The fuel mixture, pressure, and temperature resulting from combustion. Modern types of internal combustion engines; auxiliaries, including ignition, starting, and lighting systems; regulation, efficiency, and economy. Three credits first term. Required of Seniors in Mechanical Engineering. Prerequisites, Mechanical Engineering 301 and 302, and Mechanical Engineering 309 and 310. Professor VAUGHAN.

405. Mechanics of Materials. A study of the effects of load and forces in engineering structures by use of the stress-strain diagram. Determination of ultimate stress and elastic limit of materials, with investigation for maximum and minimum bending moment and shear. Torsion and its application to shafting, with theories as to elastic limit and failure. Three credits, first term. Required of Seniors in Mechanical and Electrical Engineering. Prerequisites: Mechanical Engineering 309 and 310. Assistant Professor FOSTER.

406. Mechanics. A study of the kinetics of a particle with equations of motion for translation in a straight line, for curvilinear motion, and for rotation. The statements of the principles of Mechanics are applied to practical problems dealing with Mechanical Engineering. The principle of D'Alembert is followed in preference to any others. Text-books, Poorman's *Applied Mechanics*. Two credits, second term. Required of Seniors in Mechanical and Electrical Engineering. Assistant Professor FOSTER.

408. Heating, Ventilation, and Refrigeration. This subject treats of the various methods of heating, such as by open fires, hot air, steam, and hot water; of the proper ventilation of all types of buildings; of the various types of ice-making and refrigerating machinery, and their installation, care, and management; and of the cost of heating and cooling. Two credits, second term. Required of Seniors in Mechanical and Architectural Engineering. Prerequisites: Mechanical Engineering 301 and 302. Professor VAUGHAN.

409. Machine Design. Advanced work in machine design which is a summation and practical application of the fundamentals of design heretofore taken. Exact subject to be selected by the student and professor in charge. After a preliminary sketch, calculations are made for the strength of the different parts. Both detail and assembly drawings are made, traced and blue-printed. Calculations are made which are a part of the design. Two credits, first

term. Required of Seniors in Mechanical Engineering. Prerequisites, Mechanical Engineering 303 and 304. Assistant Professor FOSTER.

410. Power Plant Design. A continuation of 401, consisting of a study of the selection, location, purpose, and proportioning of the essential details of steam power plants, such as number and size of units, engines, boilers, pumps, condensers, feed-water heaters, chimneys, auxiliaries, etc. The course consists of the study of references, lectures, and the drawing of power plant plans for the layout of the piping. Detail drawings are made and a bill of material is gotten out. Two credits, second term. Required of Seniors in Mechanical Engineering. Prerequisite, Mechanical Engineering, 401, 403, and 409. Assistant Professor FOSTER.

412. Hydraulics. Hydrostatics, hydrokinetics, including the flow of water through orifices, pipes, and open channels. Hydrodynamics, including theory of hydraulic motion and pumps. Hydraulic instruments and measurements. Text-book, Daugherty's *Hydraulics*. Second term, two credits. Required of Seniors in Mechanical Engineering. Associate Professor DANA.

415-416. Mechanical Engineering Laboratory. The testing of simple machines for efficiency under various conditions of loading. Efficiency and economy tests on injectors, pumps, steam engines, and steam turbines. Boiler tests for determining horsepower and efficiency. In addition to the testing work, advanced heat problems will be given, dealing with the various heat cycles studied in the laboratory.

The determination of efficiency and economy of gas, gasoline, and oil engines. Tests for refrigerating effect in a cold storage plant. The testing of materials of construction for strength in compression and tension; determination of elastic limit, modulus of elasticity, etc. Two credits, both terms. Required of Seniors in Mechanical and Textile Engineering. Elective for Seniors in Chemistry. Prerequisite, Mechanical Engineering 307 and 308. Associate Professor DANA and Mr. WORTH.

417-418. Machine Shop Work. Making the parts of some machine or of an engine. Making tools, such as taps and reamers. Laying out work. Duplicate and interchangeable parts. Working to standard gages. One credit, both terms. Required of Seniors in Mechanical Engineering. Elective for Seniors in Electrical Engineering. Prerequisites, Mechanical Engineering 305 and 306. Mr. PARK.

419-420. Heat Engines. Nature and measurement of the units of heat, work, and power as used in steam engineering. A study of the properties of steam; use of the "Steam Tables" for solving problems. The theory of steam calorimeters, mechanical mixtures, and combustion of fuels. The application of the above to boilers for the purpose of determining rating, capacity, and efficiency. The function of the various boiler auxiliaries is critically examined. Two credits, both terms. Required of Seniors in Civil Engineering and Textile Manufacturing. Prerequisites, Physics 201-202, Algebra 102. Associate Professor DANA.

For Short Courses

First Year

11-12. Mechanical Drawing. Instruction in care and use of instruments; lettering, geometrical drawing, projection drawing; isometric and cabinet projections; drawing from working sketches of machine details; tracing; blue-printing; miscellaneous problems. Two credits, both terms. Required of students in Mechanic Arts. One credit, both terms. Required of students in Auto-Mechanics and Textile Manufacturing. Mr. J. T. MARTIN and Mr. H. A. MARTIN.

NOTE.—Each student will be required to furnish, at his own expense, the following outfit: To insure uniformity in grade of instruments and other supplies, the Department keeps for sale, at practically cost, the articles named below. These may be purchased elsewhere, but must be approved by the Department. Estimated cost of outfit, $20 to $25. Text-book. Drawing board, 23 by 31 inches. T-square, 30 inches. 60° triangle, 9 inches, transparent. 45° triangle, 7 inches, transparent. 12-inch triangular architect's scale. Irregular curve. 4H pencil. H or F pencil. Erasers for ink and pencil. Penholder with five points. Pencil sharpener. Instrument set consisting of 6-inch compass with pen, pencil, and lengthening bar; 5½-inch dividers with hair-spring adjustment; 3-inch bow dividers; 3-inch bow pencil; 3-inch bow pen; 5½-inch ruling pen; 4½-inch ruling pen.

21. Wood Shop Work. Elementary instruction in bench work involving the use of ordinary hand tools, such as planes, saws, squares, chisels, etc. All exercises are made from blue-prints and sketches. This work leads up largely to cabinet lines, such as bookcases, tables, drawing boards, and similar things. Experience is given in hand finishing, scraping, gluing, sand-papering, staining, and varnishing. One credit, first term. Required of students in Mechanic Arts. Mr. BUSBY.

22. Wood Shop Work. Work similar to that outlined above. During the latter half of the spring term the time is devoted principally to wood turning, which includes turning between centers, face plate, chuck work, polishing and finishing. One credit, second term. Prerequisite, Wood Shop 21. Mr. Busby.

31-32. Forge Shop Work. Treatment of iron and steel, the uses of punches, swages, fullers, and set-hammers, both hand and machine tools. Exercise in drawing, upsetting, forming; scarf, jump, butt, and cleft welding; making of forge and machine-shop tools from blue-prints; hardening and tempering, annealing, carbonizing, and case hardening; selection of tool steels. Special work on equipment and repairs about the College shops and laboratories. One credit, both terms. Required of students in Auto-Mechanics, Mechanic Arts, and Textile Manufacturing. Mr. G. W. Price.

41-42. Mechanical Technology. Lectures and recitations intended to acquaint students with general engineering terms and principles; also with materials used in engineering work, such as lumber, iron, steel, copper, brass, cement, coal, and other materials. Lantern slides are used wherever possible. Two credits, both terms. Required of students in Mechanic Arts. Professor Vaughan and Assistants.

Second Year

51-52. Machine Drawing. Sketching and drawing of machine parts and machines. Detail working drawings. Tracing and blueprinting. Two credits, both terms. Required of students in Mechanic Arts and Textile Manufacturing. Mr. H. A. Martin.

61-62. Machine Shop Work. Bench and machine work. Exercises in chipping and filing. Exercises in lathe work, boring, reaming, drilling, planing, milling, and shaper work. Two credits, both terms. Required of students in Mechanic Arts. One credit, both terms. Required of students in Textile Manufacturing. Prerequisite, Forge Work 31. Mr. Park.

71-72. Power Machinery. Descriptive study of the machinery of steam power plants, engines, boilers, condensers, pumps, steam turbines, piping, care and management, study of gas and oil engines. Combustion of fuels. Indicators; indicated, brake, and boiler horsepower problems. Three credits, both terms. Required of students in Mechanic Arts. Mr. Park.

81. Pattern-making. A study of pattern-making in its relation to molding; the practical construction of patterns to prevent warping and twisting; the making of special patterns, also patterns for

different machines, such as drill presses, lathes, jointers, etc.; cores and core-boxes; introducing draft, shrinkage, finish, and the appliances and usage of modern pattern work. One credit, first term. Required of students in Mechanic Arts. Prerequisite, 105 and 106. Mr. WORTH.

82. Elementary Mechanics. This subject is intended to treat the elementary mechanics problems which arise in connection with machine shops and drafting room practice. Two credits, second term. Required of students in Mechanic Arts. Assistant Professor FOSTER.

91. Foundry Work. Recitations and exercises in foundry work, including selection and working condition of sand; use and care of tools and machines; floor, bench, machine molding, and core making; mixing cast iron and alloys. Management of cupola and brass furnace in iron and brass melting; making castings for special machines, general repairs, and machine-shop work; relation and merits of a variety of tools and materials used in foundry practice. One credit, first term; taken along with 81. Required of students in Mechanic Arts. Mr. WORTH.

92. Gas Engine Laboratory. In connection with a study of the principles of the internal combustion engine in power machinery, this laboratory course is offered for the purpose of acquainting the student with the actual handling of such engines. Practice is given on the various types of gasoline, kerosene, and oil engines. One credit, second term. Required of students in Mechanic Arts. Professor VAUGHAN.

ONE-YEAR COURSE IN AUTO MECHANICS

43-44. Auto Theory and Practice. The Automobile Course is an outgrowth of the Emergency War Training Course for gas engine and motor car repairmen given at the College during the summer of 1918, under the supervision of the Committee on Education and Special Training of the War Department. The purpose of the Emergency War Training Course was to make specialists; that is, each man was to be thoroughly familiar with some one phase of the many phases of automobile mechanics. It is the purpose of the course now being given to acquaint the student with the fundamentals of Automotive Engineering from the standpoint of operation; and by operation is meant care, adjustment, and repair of all the units comprising the automobile.

The course will consist of both text-book and shop work, and will be so given that the shop work will parallel the text work. The various units of the automobile are to be studied individually and

will be taken up in the following order: chassis, comprising frame, axles, steering gear and transmission; engine; fuel system and carburetor; ignition system; lighting and starting equipment.

That the student may not become too much of a specialist in automobile work alone, courses in Mathematics, English, Forge, and Mechanical Drawing will be scheduled in addition to the automobile text and shop work.

At present the Automobile Course is designed to cover a period of only one year; however, students taking this course will have the same privileges accorded students taking regular courses, and can enter into and enjoy all the College activities.

MILITARY SCIENCE AND TACTICS

General Purpose. To give college students that degree of training practicable at civilian educational institutions, which will enable them to intelligently perform the ordinary duties of a Lieutenant of Infantry in the Officers' Reserve Corps when called into active military service, and to give them a foundation for further qualification in the Infantry specialties.

Primary Object. To train the prospective graduates to become reserve officers; the secondary object is to impart instruction so that those students who do not complete the four years of college work will at the end of any college year have received a kind and scope of training that will make them more useful in the National Guard, the Organized Reserves, or in the military establishment in the event of public emergency.

101-102. First Year Basic Course. Infantry drill regulations; rifle marksmanship; scouting and patrolling; physical training; military courtesy; individual infantry equipment; interior guard duty; signalling; command and leadership. Four hours per week, two credits for each term; required of all physically fit male students who have not completed the course or the equivalent at an institution under the supervision of a Regular Army officer detailed thereat.

201-202. Second Year Basic Course. Military map reading and sketching; infantry weapons; the bayonet, automatic rifle, hand and rifle grenades; musketry; military hygiene, sanitation and first aid; command and leadership. Four hours per week, two credits for each term; required of all physically fit male students who have not completed the course or the equivalent at an institution under the supervision of a Regular Army officer detailed thereat.

301-302. First Year Advanced Course. Military field engineering; infantry weapons; the machine gun; 37-mm. gun; light

mortar; military law and rules of land warfare; command and leadership. Five hours per week, three credits for each term; elective for students who have completed 101-102 and 201-202 or its equivalent and who have been selected by the President and the Professor of Military Science and Tactics.

401-402. Second Year Advanced Course. Minor tactics; military history; administration, infantry company; command and leadership; pistol marksmanship. Five hours per week, three credits for each term; required of all students who have completed 301-302 or its equivalent, and have received commutation of rations therefor.

NOTE.—All students pursuing the above courses will participate in such military ceremonies as the faculty may direct.

Credit. Full credit will be given for work at other institutions maintaining a **Senior** unit of the Reserve Officers' Training Corps as shown by the student's record, Form No. 713 AGO, kept by the Professor of Military Science and Tactics.

Graduates of **Junior** units of the Reserve Officers' Training Corps, either in essentially military schools or in preparatory schools, who have satisfactorily completed two or more years of the course, will be given partial credit (not exceeding one year) for the subject-matter covered by such students upon their entrance into the R. O. T. C. unit at this institution. In order to obtain credit, students must submit a detailed certificate as to the subjects covered, signed by the proper school official and the Professor of Military Science and Tactics.

MODERN LANGUAGES

For Four-year Courses

The primary purpose of the work in this Department is to enable the student to read and translate intelligently the literature of French, German, and Spanish. Work in translation is begun as early as possible and continued with increasing importance throughout the entire course. Graduate students electing to do work in the Department, and others wishing to do special work in this field, will arrange their courses with the head of the Department. So far as possible, the work will be adjusted to suit their special needs. One year's work in either French, German, or Spanish is required of all members of the Reserve Officers' Training Corps.

201-202. Beginner's German. Texts: Bacon's *German Grammar;* readings to be selected. German grammar with elementary reading and oral practice. This course is intended for students who have never studied German. Three credits, both terms. Required of

Sophomores in Chemistry and Juniors in Dyeing. Elective for Juniors in Agricultural Chemistry. Professor HINKLE and Mr. WILSON.

203-204. Beginner's French. Text: Fraser and Squair's *French Grammar*, Halévy's *L'Abbé Constantin*. Reading and oral practice with elements of grammar. This course is intended for students who have had no previous knowledge of French. Practice in the pronunciation and hearing of French will be afforded by means of reading and dictation; and, as early as practicable, the recitations will be conducted at least partially in French. Two credits, both terms. Required of Sophomores in Architectural Engineering, Electrical Engineering, and Mechanical Engineering. Professor HINKLE and Mr. WILSON.

205-206. Beginner's French. Same as course 203-204. Alternate elective with Beginner's Spanish 209-210 for students in Business Administration and Shop Management. Elective for Juniors in Chemistry and all Textile courses. Three credits, both terms. Professor HINKLE and Mr. WILSON.

207-208. Beginner's Spanish. Texts: Wagner's *Spanish Grammar*, Turrell's *Cuentos Hispanoamericanos*. Reading, translation, composition, and conversation. Designed for those who have had no previous training in the language. This course will be given in such manner as to give a basis for a spoken knowledge. Practice in the pronunciation and hearing of Spanish will be afforded by means of reading and diction; and, as early as practicable, the recitations will be conducted at least partly in Spanish. Two credits, both terms. Required of Sophomores in Civil Engineering. Professor HINKLE and Mr. WILSON.

209-210. Beginner's Spanish. Same as course 207-208. Alternate elective with Beginner's French 205-206 for Sophomores in Business Administration. Three credits, both terms. Professor HINKLE and Mr. WILSON.

301-302. Beginner's French. Same as course 203-204. Elective for Juniors in Agriculture who do not enter the Reserve Officers' Training Corps and Juniors in Textile Chemistry and Dyeing. Three credits, both terms. Professor HINKLE and Mr. WILSON.

NOTE.—Beginner's Spanish 307-308 may be substituted for this course.

303-304. Intermediate German. Texts: Storm's *Immensee*, Gersäcker's *Germelshausen*, Seidel's *Der Lindenbaum*, Hillern's *Höher als die Kirche*, and Wallentin's *Grundzüge der Natürlehre*. Reading,

translation, and discussion. A review of the fundamental principle of grammar. Rapid reading and sight translation stressed. Ele mentary scientific German is begun in the second term. Three credits both terms. Required of Juniors in Chemistry. Elective for Senior in Dyeing and Seniors in Agricultural Chemistry. Professor HINKL and Mr. WILSON.

305-306. Intermediate French. Text: Fraser and Squair' *French Grammar;* readers to be selected. Grammar, composition, an translation continued. Rapid reading and sight translation stressed A general survey of French literature is made. Initial practice i commercial correspondence is begun in this course. Parallel reading and reports. Prerequisite, Beginner's French, both terms, or equiva lent credit. Required of Juniors in Architectural Engineering an Juniors in Business Administration and Shop Management who com pleted course 205-206 in Sophomore year. Elective for Juniors i Electrical and Mechanical Engineering, and Seniors in Agricultur Chemistry, and all Textile courses. Three credits, both terms. Pro fessor HINKLE.

307-308. Beginner's Spanish. Same as course 207-208. Re quired of Juniors in Textile Manufacturing, and Engineering. Tw credits, both terms. Professor HINKLE and Mr. WILSON.

309-310. Beginner's Spanish. Same as course 207-208. Elec tive for Juniors in Agriculture and Architectural Engineering wh do not enter the Reserve Officers' Training Corps. Three credits, bot terms. Professor HINKLE and Mr. WILSON.

311-312. Intermediate Spanish: Texts: To be selected. Gram mar, composition, and translation continued. Designed primarily t develop rapid reading and conversational ability. A number o Spanish stories are read. Composition is stressed and initial prac tice in letter writing is begun. Open to students who have had on year in the language. Required of Juniors in Business Administra tion and Shop Management who completed course 209-210. Electiv for Juniors in Civil Engineering and Seniors in Architectural Eng neering, in Textile Manufacturing, and Engineering and Agricultur except those in Agricultural Chemistry and Veterinary Medicin Three credits, both terms. Professor HINKLE.

401-402. Introductory Scientific French. Texts: Daniel's *Frenc Scientific Reader.* Others to be selected. Reading, translation, an discussions. Review of the fundamental facts of grammar. Wor based upon Daniel's *French Scientific Reader.* Other selections ar read according to the needs of the class. Three credits, both term Elective for Seniors in Architectural Engineering, Chemistry, Electr cal Engineering, and Mechanical Engineering. Professor HINKLE.

403-404. Scientific German. Texts: Phillips's *Chemical German.* Other texts to be selected. An extensive course in scientific literature, with special reference to chemical German. Designed to meet the needs of Seniors in Chemistry. Authors will be read according to the needs of the students. Three credits, both terms. Elective for Seniors in Chemistry. Prerequisites, 201-202 and 303-304. Open to graduates. Professor HINKLE.

NOTE.—Graduate students electing this course will arrange for additional outside work.

405-406. Commercial French. Text: Graham and Oliver's *French Commercial Practice Connected With the Export and Import Trade*, Gregg's *La Correspondance Elémentaire.* In this course practice is given in the translation and production of commercial correspondence. A large amount of commercial literature will be read and analyzed in order to accustom the student to the peculiar terminology of French business correspondence. Such things as orders, forwarding, discounts, credits, payments, complaints, soliciting offers, etc., will be studied and practice given in this type of composition. Three credits, both terms. Elective for Seniors in Business Administration who have completed courses 205-206 and 305-306. Mr. WILSON.

407-408. Commercial Spanish. Text: Graham and Oliver's *Spanish Commercial Practice Connected With the Export and Import Trade.* This course is designed to give practice in the handling of commercial correspondence in Spanish. A large amount of commercial literature will be read in order to accustom the student to the peculiar and courteous character of Spanish when used for business purposes. Orders, forwarding, discounts, credits, payments, complaints, soliciting offers, and other similar subjects will be studied and practice given in this type of composition. Three credits, both terms. Elective for Seniors in Business Administration who have completed courses 209-210 and 311-312. Mr. WILSON.

409-410. Industrial Spanish. Texts: Sparkman's *Industrial Spanish;* others to be selected. This is an extensive reading course on industrial and vocational subjects. It is designed and conducted in such a way as to give the student a practical and every-day vocabulary on such topics as food, raiment, amusements, material comforts, and the products of modern industry. The work in conversation and theme-writing is based upon such subjects as those above mentioned, and at least one theme per week is required. Three credits, both terms. Elective for Seniors in Civil Engineering. Professor HINKLE.

PHYSICS

For Four-year Courses

101-102. General Physics. A general course in Physics for Engineering students. Mechanics, heat, light, and sound are taken up in the order named, the course running through both terms. While the course is an introduction to the subject of Physics, it is strictly of college grade, and no high school Physics credit can be substituted therefor. Demonstrated lectures, recitations, and laboratory work are coördinated to make the work thorough, instructive, and interesting. Two hours of class work and three hours of laboratory work. Three credits, both terms. Laboratory fee, $1. Required of Freshmen in Engineering and Chemistry. Professor HECK, Mr. FOSTER, Mr. COOKE.

201-202. Second Year Engineering Physics. A continuation of the study of Physics adapted to the needs of engineers. More advanced mechanics and elementary thermodynamics are studied in the first term. Electricity, optics, and acoustics occupy the second term. Demonstrated lectures and recitations three hours a week and three hours of laboratory. Four credits, both terms. Required of Sophomores in Engineering and Chemistry. Laboratory fee, $1. Associate Professor DERIEUX, Assistant Professor DIXON.

205-206. General Physics for Textile Students. A general course in Physics more especially adapted to the needs of men in Textile courses. It covers mechanics, heat, and electricity, with a few class periods only devoted to light and sound. The mechanics is largely that of working machines and the heat emphasizes engines and humidity relations. The study of electricity is adapted to practical relations met in the mill and every-day life. Two hours of class work and two hours of laboratory each week. Three credits, both terms. Laboratory fee, $1. Required of Sophomores in Textile Manufacturing and Textile Chemistry. Students in Textile Chemistry have no laboratory work in the second term. Associate Professor DERIEUX, Assistant Professor DIXON, Mr. COOKE, Mr. FOSTER.

207-208. General Physics for Agricultural Students. A general course in Physics, less mathematical and more descriptive. The subjects are especially emphasized which concern force interactions met in Agriculture, such as mechanics of machines and liquids, heat and humidity relations, practical optics and the spectrum, practical electricity and wiring. A month is given to the study of weather and forecasting. Two hours class work and one laboratory period each week. Three credits, both terms. Required of Sophomores in Agriculture. Laboratory fee, $1. Professor HECK, Mr. FOSTER, Mr. COOKE.

301-302. Descriptive Astronomy and Meteorology. The first term embraces a survey of the stars, the solar system, and modern astronomical theories and research. Class hours are alternated with night work, using the equatorially mounted 5-inch telescope of the college. The second term is given to a general course in Meteorology, including practice in forecasting. A student in any scientific course in college will find the work of either term a profitable elective. Two credits, both terms. Professor HECK.

303-304. Advanced Electricity. This is a third year course in Physics given to students who intend to better prepare for research positions in science or engineering. Lectures parallel Hadley's *Electricity and Magnetism* as text. Two or three hours credit a week throughout the year, as the majority of those electing the course find suitable to their schedules. Assistant Professor DIXON.

305-306. Advanced Optics. A course similar to 303-304 on the subject of light and optical instruments. Two three-hour laboratory periods alternating with lecture periods. Two or three hours credit as best suited to the class schedule. Both terms. Associate Professor DERIEUX.

501-502. Electromagnetic Theory. Open to graduate students only. Lectures and reference work, using Starling's *Electricity and Magnetism* for parallel study. Three credits a week throughout the year. (Given alternate years, not given in 1922-23.)

503-504. Molecular Theory and Electron Theory. Three periods a week throughout the year. Alternates with 501-502. Associate Professor DERIEUX, Assistant Professor DIXON.

505-506. Research Laboratory. Eight to sixteen hours a week devoted to research in an original problem in heat, acoustics, or electricity. Open only to graduate students. Professor HECK.

507-508. Physics Seminar. The Department meets Thursday nights to review current research and recent theories in the field of Physical Science. Attendance and participation in these meetings may be offered as one hour of credit by those prepared to do so. Professor HECK.

For Short Courses

11-12. Physics. A physical science course is given under the head of Physics. The course embraces the historical development of the scientific ideas of today, with special emphasis on the development of practical machines and engines. Practical determinations of densities, strength of materials, measurements of heat and electricity,

and other everyday determinations are made before the class. Machines are analyzed and the relations of force and energy are worked out. Practical heating and the wiring of electric circuits are also studied. The purpose of the course to be both educative and practical is carefully followed. Required of first-year students in Mechanic Arts. Three credits, both terms. Professor HECK.

POULTRY SCIENCE

For Four-year Courses

201. General Poultry. The first four weeks will be devoted to a discussion of the various phases of the poultry industry; four weeks to an elementary study of breeds and breeding; four weeks to a study of the principles of ventilation and sanitation; four weeks to poultry-house construction. Work in the poultry laboratory and at the poultry plant will be a part of the course, and will be an application of the principles taught. This course is for all regular four-year Sophomore Agricultural students who are taking Poultry for the first time. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Three credits, first term. Required of Sophomores in Agriculture. Mr. HALL.

301. Breeds and Judging. This is a detailed study of the origin of each breed, of the types and varieties, and of mating birds for the best results. Students taking the Poultry Course will have the opportunity to mate a pen of birds of any of the twenty breeds on the College and Station poultry plant and care for them for a year and note the results of the progeny. To aid in this study there are colored plates; also cards mounted with typical feathers from all breeds. The American Standard of Perfection will be used as a text. Three periods, first term. Required of Juniors in Poultry. Mr. HALL.

302. Advanced General Poultry. This is a continuation of course 201, and will be assigned as follows: four weeks will be devoted to the elementary study of parasites and diseases of fowls and their control; four weeks to the anatomy of the digestive tract and the physiology of digestion and a study of the principles of poultry feeding; four weeks to the balancing of feed mixtures and feeding of birds for the various purposes for which they are kept; three weeks to commercial plant construction and management; three weeks to the study of market grades of eggs and practical market methods, and a study of proper methods of dressing, handling, grading, refrigerating, packing, and shipping; a study of the method of saving feathers, grading, storing, packing, curing, and shipping same;

and the methods of collecting, preserving, and handling poultry manure. Three credits, second term. Required of Juniors in Poultry. Elective for all other Juniors in Agriculture. *Poultry Culture, Sanitation, and Hygiene* is used as text. Mr. HALL.

304. Advanced Poultry Breeds and Judging. This is an advanced course which is to be preceded by course 301, Breeds and Judging. A continuation will be made of the study of the type and feather pattern of the various solid and parti-colored birds and plant demonstrations as to proper way of mating each breed and variety to get the desired results. Also there will be a continuation of practice lessons in judging the various breeds. The College and Experiment Station poultry plant keeps twenty-five breeds of poultry and pet stock, many of which have won medals, trophy cups, diplomas, and ribbons at various poultry shows, thus insuring the highest type of birds for judging experience. Junior elective for all Agricultural students. Three credits, second term. Mr. HALL.

305-306. Poultry Anatomy and Physiology. A complete course in the anatomy and physiology of the domestic fowl. This includes a study of the bony structure, muscles, ligaments, and tendons, digestive structure, genito-urinary apparatus, the circulatory system, the nerves, and the special senses. Complete dissections will be made. This course prepares the student for the detailed study of diseases. *Anatomy of the Domestic Fowl* will be used as a text. Three credits, both terms. Required of Juniors in Poultry. Professor KAUPP.

401. Diseases and Poultry Pathology. In this course the time will be divided as follows: four weeks to a detailed study of medical parasitology, giving the habits of the parasites affecting the domestic fowls, effects upon their host and methods of their control and eradication; six weeks to noncontagious diseases and their treatment; eight weeks to contagious diseases, prevention or control, and treatment. Laboratory work will be given to accompany each division. Museum specimens, as well as autopsies and clinical cases from the research laboratory will be used. *Diseases of Poultry* will be used as a text. Three credits, first term. Required of Seniors in Poultry. Professor KAUPP.

402. Specialized Poultry Marketing. First, a six weeks detailed study of grading, handling, preserving, refrigerating, storing, packing, and shipping eggs. This will be followed by a detailed study of at least three large markets and of ten North Carolina markets, noting fluctuations in market prices and the changes in the feed markets for the same periods. Six weeks will be devoted to finishing, sticking, picking, trussing, scoring, grading, refrigerating,

shaping, packing, and shipping dressed poultry. A study of market grades in detail and the fluctuations of the market prices, together with a study of the fluctuations of the prices of feeds, will be given for the same length of time. This will include the cost of production. Six weeks are devoted to live fowls, finishing, grading, handling, shipping, and a similar study of the live poultry markets as above. Actual shipping experience will be given. Three credits, second term. Required of Seniors in Poultry. Professor KAUPP.

403. Poultry Accountant Course. This course will cover detailed methods of keeping flock, brooder, incubator, and general poultry accountant work. Methods of making poultry surveys, and other work pertaining to poultry data. One credit, first term. Required of Seniors in Poultry. Professor KAUPP.

404. Incubation, Brooding, and Flock Management. This course will be divided as follows: four weeks to the running of an incubator, each student operating his own incubator; eight weeks to lectures and practice work in operating a brooder, each student operating his own brooder, taking the chicks he hatches in the incubator; six weeks to broiler feeding and caponizing and capon production. During the entire course the student has charge of a plant flock, caring for the birds and summing up at the end of the month the various details of the accounting. The student also has the opportunity of setting a hen and caring for her brood. Fee, $2. Three periods, second term. Required of Seniors in Poultry. Three credits, either term. Elective for all Seniors in Agriculture. Mr. HALL.

405. Poultry Seminar. In this course there will be taken up and discussed the printed and available bulletins and reprints from the various research laboratories and plants of the various problems and results covering all phases of advanced poultry work. Two credits, first term. Required of Seniors in Poultry. Professor KAUPP.

Courses for Graduates

Students entering graduate work in Poultry Science should have a thorough training in the fundamental principles of the subject. The following graduate courses are offered for the year 1922-23.

501-502. Animal Nutrition. This course, given by the Animal Husbandry Division, is open to advanced students in Poultry Science work. In this course there will be a study of the recent scientific publications on the chemistry and physiology of nutrition of animals, and the chemical and physiological changes and processes involved in the activities of animal life. The student will be expected to follow out courses in assigned reading, hold conferences with the instructor, and submit regular reports on the progress of his studies.

503-504. Investigational Work. The Poultry Science Department has many investigational projects under way. The graduate student will be expected to select one of the subjects below and devote half of his time to assisting in carrying the investigation forward: (*a*) the effects of various rations on egg production; (*b*) the effects of various rations upon body development of poultry; (*c*) the methods of feeding, handling, and control of chick mortality; (*d*) the effects of feeds upon the quality of eggs; (*e*) the effects of feeds upon the quality of flesh of the table fowls; (*f*) the effects of cottonseed meal upon poultry breeding stock, egg production, development of young, and constitutional vigor; (*g*) the relative value of various animal proteins for feeding fowls; (*h*) Mendelian studies; (*i*) laboratory work in Poultry Pathology, Anatomy, or Physiology. One selection may be made from the Animal Industry Division subjects. Professor KAUPP.

For Short Course

21. Farm Poultry. This course will include the fundamentals of selection and mating for egg production, for meat production, and for dual purpose fowls. Practical culling work to learn how to eliminate nonproducers will be given. Methods of ventilation and of poultry-house construction, poultry feeds, feeding for egg production, artificial and natural incubation and brooding, feeding of chicks during the brooding period and as chicks on range. Grading, candling, packing, storage, and marketing of eggs. Fattening, dressing, refrigerating, packing, and marketing of poultry. Selection of hatching eggs and methods of packing for shipping. *Poultry Culture, Sanitation, and Hygiene* will be used as a text. Three credits, first term, second year. Two-year course in Agriculture. Mr. HALL.

For Winter Course

Poultry

There will be taught newer methods of culling birds to eliminate from the farm flock the unprofitable ones. Selection and breeding for egg-production, broilers, and general utility will also be thoroughly discussed. The proper methods of constructing houses for layers and breeding fowls, also range houses for youngsters. How to house the sitting hen and her brood will receive attention. There will be discussed the various feeds and how properly to feed for egg-production; the young and growing chicks; and the sitting hen and her brood. Candling, grading, packing, shipping eggs by parcel post and express. Fattening, sticking, picking, refrigerating, and marketing poultry will be given attention. Mr. HALL.

RURAL LIFE*

For Four-year Courses

312. Farm Finance. This course takes up the development of farmers' credit problems, the sources of farm credit, the various factors determining interest rates, and means of improving the present financial institutions for meeting the farmer's financial needs. Required of Juniors in Rural Life and Agricultural Administration. Three credits, second term. Mr. .....

401. Agricultural Economics. This course is fundamentally the application of the principles of economics to the occupation of farming. It deals with such specific problems as the economic choice of crops and livestock; the economic organization of crops, livestock, equipment, and labor and wages, farm credits and finances; farm rents and profits; types of land tenure; and the economic motives and ideals of agriculture. Required of all Seniors in Agriculture and Agricultural Administration except those in Veterinary Medicine. Three credits, first term. Professor TAYLOR.

402. Farm Marketing. This course treats of that phase of farm business which relates itself to local, central, and world markets. It studies the areas of the world which produce the different types of farm products; the degree of competition which exists between other areas of farm production and the United States; our present systems of marketing and their results, and all forms of cooperative marketing. A number of farm products are taken up and traced from the farm to the consumer's table to the end that a thorough understanding may be had of the specific marketing problems which confront the producers of the various farm products. Required of Seniors in General Agriculture, Farm Crops, Rural Life, and Agricultural Administration. Elective for all other Seniors in Agriculture except those in Veterinary Medicine. Three credits, second term. Professor TAYLOR.

403. Rural Social Problems. This is an elementary course in Rural Sociology. It deals with the rise and nature of the so-called Rural Social Problem and the general social conditions which maintain and result from the occupation of farming. Such specific problems as rural isolation and communication, rural health, rural recreation, the rural school, the rural church, and the rural home are taken up and analyzed. In as far as possible, a first-hand study is made of different rural communities and their problems by the instructor and students. Required of Juniors in Rural Life and of Seniors in

*General Economics, B. A. 301, and General Sociology, B. A. 302, are listed under the head of Business Administration and Social Science.

Agricultural Administration; elective for all other Agricultural Seniors except those in Veterinary Medicine. Three credits, first term. Professor TAYLOR.

405. American Land Tenure and Utilization. This course takes up the history and development of American land tenure. More specifically it deals with land tenure in the early colonies, the distribution of public domain, the growth of farm tenancy, the social and economic results of farm tenancy, and recent proposals for the colonization and more effective utilization of agricultural lands in the United States. Required of Juniors in Agricultural Administration and of Seniors in Rural Life. Three credits, first term. Mr. .....

409. Rural Organization. This is a study of all phases and types of rural economics and social organization. It is a study of farmers' movements and their bearing upon agricultural and national life; a study of such organizations as the Grange, the Equity Society, the Farmers' Union, and the Farm Bureau organization. Special emphasis is given to all the agencies and institutions of local communities. Required of Seniors in Agricultural Administration and in Rural Life. Three credits, first term. Professor TAYLOR.

Courses for Graduates

501-502. Seminar. Special economic and social problems. This course is primarily for graduate students who are working on specific thesis problems. Special chosen Seniors may take this course upon the approval of the head of the Department of Business Administration. Three credits, both terms. Professor TAYLOR.

For Two-year Course in Agriculture

22. Rural Economic Organization. A study of the principles and practices of economics as applied to farming. The following problems are studied: economic choice of crops, livestock, farm equipment; the economic organization of a farm; causes for present prices of land and agricultural products; farm labor and wages, rural credit and finance, rents and leases, tenantry and ownership of land. Types of rural economic organizations are given special attention. Two credits, second term, second year. Professor TAYLOR.

32. Rural Social Organization. A study of all rural social institutions and rural social problems. Such problems as rural government and law, rural education and schools, rural church and religion, rural homes and recreation, etc., are specifically studied. Two credits, second term, second year. Mr. .....

42. Farm Cost Accounting. A complete analysis of farm business by accounting in which simplicity, accuracy, and profits will be

emphasized. A study of farm accounting to enable the farmer to find cost of production. Labor and equipment accounts; depreciation of farm enterprises; business correspondence and forms. Each student will be taught and required to keep a farm business record and a farm diary. Two credits, second term, second year. Mr. WILSON.

52. Marketing Farm Products. A study of the present systems of marketing; new types of coöperative marketing; the function of grading, standardizing, processing, storing, and financing in the market problem. Special attention will be given to the marketing of cotton, tobacco, and peanuts. Two credits, second term, second year. Mr. .....

SOILS

For Four-year Courses

202. Geology. The work of the atmosphere, water, and ice in bringing about present earth and soil conditions. The pricipal soil-forming minerals and rocks will be considered in relation to their effects in determining soil characteristics. Three credits, second term. Required of Agricultural Sophomores. Mr. ETHERIDGE.

301-302. Soils. The physical characters, such as water-holding capacity, capillarity, effect of mulches, temperature and weight, and modification of these characters by tillage, cropping, and all operations of practical soil management, are discussed and exemplified in the classroom, laboratory, and field. Some attention is given to the classification of soils in the United States, and especially in North Carolina. The physical, chemical, and bacterial soil conditions are discussed in relation to each other and to their effects on soil fertility. Three credits, both terms. Required of Agricultural Juniors. Deposit, $2. Prerequisites, Chemistry 101-102, 201-202, and 212, and Physics 231-232. Professor SHERWIN and Mr. ETHERIDGE.

304. Soil Survey. A study of the principal soil types of the United States and all the important types of North Carolina; their formation, physical and chemical characteristics, crop adaptations, and identification. Field examination of all local types will be made. Three credits, second term. Required of Juniors in Soils; elective for other Juniors. No deposit. Professor SHERWIN and Mr. ETHERIDGE.

402. Fertilizers. Fertilizing as a factor in soil management and economical crop production. Sources, composition, availability, and value of various commercial and farm fertilizers. Comparative value of the elements of plant food in different carriers as shown by their productive capacity. Three credits, second term. Required of all Agricultural Seniors, except those in Veterinary Medicine. Prerequisite, Soils 301-302. Professor SHERWIN and Mr. ETHERIDGE.

403-404. Advanced Soils. In this course the student will be guided in the study of any line of Soils work he may choose, along either practical or scientific lines. Laboratory and field work will be given. Considerable reference will be made to Experiment Station literature with the aim of acquainting the students with the literature on the subject, and with the methods of investigation used. This course will be of special help to men who are to engage in either farming or demonstration work, as well as to those primarily interested in Soils. Three credits, both terms. Required of Seniors in Soils; elective for all other Seniors in Agriculture, except those in Veterinary Medicine. No deposit. Prerequisite, Soils, 301-302. Professor SHERWIN and Mr. ETHERIDGE.

Course for Graduates

501-502. Soil Research. The Department of Soils is prepared to accommodate graduate students in research involving either physical or chemical problems of the soil. Two to four credits each term. Professor SHERWIN.

For Two-year Course

21. Soils and Soil Fertility. A study of the soil as affected and determined by its source and method of formation. Texture and humus as they affect the physical and other properties. Conservation and control of soil moisture. Composition, sources, and efficiency of various fertilizing materials; original and residual effects on the soil and on each other. Home mixing and duplication of formulas. Various forms of lime; their composition, agricultural value, and best method of using. Farm manure: its composition and value in soil building; methods of handling to conserve its plant food and to aid most economical crop production. Four credits, first term, second year. Professor SHERWIN and Mr. ROYSTON.

For Winter Course

Fertilizers and Lime. Their action on soils and crops. Plant food of the soil in relation to its fertilizer needs. Effect of other soil factors on the efficiency of fertilizers. Best fertilizers to use under various soil conditions. Cost and efficiency of plant food in different fertilizer materials. Fertilizer arithmetic. Three hours a week. Professor SHERWIN and Mr. ETHERIDGE.

TEXTILE MANUFACTURING, TEXTILE ENGINEERING, AND TEXTILE CHEMISTRY AND DYEING

For Four-Year Courses

101-102. Carding and Spinning. Lectures and recitations; practice in operating card and spinning room machinery. Cotton: classifying the plant, its growth, varieties, ginning, baling, and mar-

keting the raw staple. Cotton at the mill; selecting and mixing. Openers and lappers; cards, sliver lap machines; ribbon lap machines; combers, railway heads; drawing frames, slubbers; intermediate; speeders; jacks. Ring spinning frames and mules. Spoolers. Twisters; reels; cone-winders. Construction and functions of each machine; making the various calculations. Drafts, speed of parts, production. Producing yarns of different counts, single and ply. Testing yarns for breaking strength and elasticity. Required of Freshmen (for number of credits see tabulation) Sophomores, Juniors, and Seniors. Assistant Professor PRICE.

103-104. Weaving. Lectures and practice in warp preparation, operating and fixing looms, cloth finishing machinery. Warp preparation; pin frame warper; section warper; beam warper; construction of beam warper, stop motion, measuring motion, creel; pattern warp making; long and short chain beamers. Slashing: Steam cylinder slasher; hot-air slasher; construction of slasher, creel, cylinder, immersion roll, squeeze rolls, drying fan, separator rolls, winding yarn on beam, cone drive, slow motion, measuring and cut marking motion. Sizing: Construction of size 5 kettle; size mixing and boiling; division of sizing ingredients; value of ingredients; sizing recipes for light, medium, and heavy sizing. Loom mounting: Reeds and harnesses; drawing in and putting warps in loom. Looms: Hand looms and power looms; construction of plain loom; principal movements in weaving; let-off and take-up motions; filling stop motion; warp stop motion. Cams and their construction. Automatic looms, construction and advantages. Drop box looms: Chain building for box looms; changing boxes to have easy running looms; construction and value of multipliers; timing and fixing box motions. Pick and pick-looms. Box-chain and multiplier-chain building; arrangement of colors in boxes to give easy-running loom. Ball and shoe-pick motion. Construction and fixing of head motion. Dobby, single and double index; construction and fixing of dobby; extra appliances necessary for weaving leno, towel, and other pile fabrics. Value of easers; half motion and jumper attachment for leno. Springs and spring-boxes. Pattern chain building. Jacquard: Single and double lift; construction and tie-up. Weave-room calculations, speed and production calculations, relative speed of looms, counts of cotton harness. Finishing: Inspection of cloth; singeing and brushing; calendering, tentering; folding and packing for the market. Equipment necessary for warp preparation, weaving, finishing; approximate cost of production of fabrics in the different processes. Text-book, Nelson's *Practical Loom Fixing*. Required of Freshmen (for number of credits see tabulation), Sophomores, Juniors, and Seniors. Professor NELSON, Mr. PRENTIS, Mr. HART.

106. Textile Engineering Lectures. A series of lectures intended to acquaint students with names and terms used in textile work, and a general survey of the textile industry. Various elementary textile subjects are given as an introduction for the work which follows in the higher classes. One credit, second term. Required of Freshmen in Textile Manufacturing. Mr. HART.

201-202. Carding and Spinning. Continuation from Freshman year. See course 101-102. Required of Sophomores. Two credits, both terms.

203-204. Weaving. Continuation from Freshman year. See course 103-104. Required of Sophomores. Two credits, both terms.

205-206. Textile Designing. Lectures and practice in designing. Method of representing weaves on design paper. Foundation weaves: Plain, twill, satin. Ornamentation of plain weaves. Wave designs, pointed twills, diamond effects. Plain and fancy basket weaves, warp and filling rib weaves. Broken twills, curved twills, corkscrew twills, entwining twills. Granite weaves, satin shading. Combination of weaves; figured weaving on plain ground. Satin and figured stripes on plain ground. Spots arranged in different orders on plain, twill, satin ground. Imitation leno, honeycomb weaves. Bedford cords and combination with other weaves. Wave designs, pointed twills, diamond effects. Plain and fancy piques. Double plain, figured double plain. Double cloths. Cloths backed with warp; cloths backed with filling. Cloths ornamented with extra warp; cloths ornamented with extra filling. Cotton velvet. Corduroy. Matelasse: leno weaves with one, two, and more sets of doups. Principles of working both top and bottom doups. Combination of plain and fancy weaves with leno. Methods of obtaining leno patterns. Jacquards. Distribution and setting out of figures for geometrical and floral effects. Distributing figures to prevent lines. Areas of patterns. Preparation of sketches. Transfer of sketches to design paper. Painting in the design with different weaves according to sketch. Shading the patterns. Card cutting and lacing. Required of Sophomores (for number of credits, see tabulation), Juniors, and Seniors. Professor NELSON, Mr. PRENTIS.

208. Cloth Analysis and Fabric Structure. Calculating particulars of cloth from data ascertained from samples. Shrinkages. Dents in patterns; patterns in warp. Drafting and pattern chain building. Reed and harness calculations. Calculations to obtain quantities of warp and filling in stripes and check fabrics. To find number of threads per inch, using a given weight of warp; also number of picks per inch, using a given weight of filling. Yarn calculations. System of numbering woollen, worsted, silk, linen, and cotton

yarns. Determination of one system of yarn to that of another. Textile calculations. Determining the number of threads and picks per inch to make a perfect cloth. Calculations to determine the texture in an unequally reeded fabric. Diameter of threads. Balance of cloth. Texture for double cloth. Required of Sophomores (for number of credits see tabulation), Juniors, and Seniors. Professor NELSON, Mr. PRENTIS.

209-210. Dyeing. The student learns the principles and procedures upon which the art of bleaching and dyeing is based. He learns how to identify the various fibers, and the chemical methods for estimating their relative proportions in mixed goods. He next learns the action of the mineral acids under various conditions upon the fibers, and the action of volatile and nonvolatile organic acids. The action of acid salts and salts which liberate a mineral acid when heated is studied, together with the commercial application of this principle to the recovery of wool from rags by "carbonization." The student is then acquainted with the action of alkalies upon the fibers, and with mercerization. He next studies the use and misuse of "bleach" or "chemic." Procedures for mordanting and weighting the fibers are carried out, along with the fixation of compounds. An experimental outline of a practical cloth bleach for printers and dyers by the lime-and-ash process, and the bleaching of market whites is carried out with careful comparisons and thorough study. The sodium peroxide process is also studied, carried out, and compared. The student then bleaches wool by the bisulphite, permanganate, and sodium peroxide processes, and finishes by studying the injurious effects of improper water and the means of remedying these effects. In this course the student conducts experiments to illustrate methods and principles as a supplement to the lectures, and mounts samples for a comparison of results. Two credits, both terms. Required of Sophomores. Mr. LEDDY.

301-302. Carding and Spinning. Continuation from Sophomore year. See course 101-102. Three credits, both terms. Required of Juniors in Textile Manufacturing and Engineering.

303-304. Weaving. Continuation from Sophomore year. See course 103-104. Required of Juniors. Three credits, both terms, Textile Manufacturing; two credits, both terms, Textile Engineering.

305-306. Textile Designing. Continuation from Sophomore year. See course 205-206. Three credits, first term; two credits, second term. Required of Juniors in Textile Manufacturing.

308. Cloth Analysis. Continuation from Sophomore Year. See course 208. One credit, second term. Required of Juniors in Textile Manufacturing.

309-310. Dyeing. The Junior year is devoted exclusively to the study of dyes and the various methods of applying them. The student starts with the direct cotton colors and compares the action of the various assistants, the effect of temperature, "long" and "short" baths, etc. The dyeings are tested for fastness to washing, soaping, light, perspiration, cross-dyeing, etc. He then takes up the methods of improving the fastness, among which are included after-treatment with potassium bichromate and copper sulphate, topping with basic dyes, and daizotizing and developing. These dyeings are again tested, and in addition are tested for fastness to street dirt, ironing, chlorine, etc. The methods of applying these colors to wool and silk, together with after-treatments, are next taken up. A thorough study of the sulphur colors is the next step. The methods of applying the basic colors to cotton are next studied, after which the student takes up their application to wool and silk. The subjects next in order are the acid dyes, eosines, and alkaline blues, the after-chromed acid colors, acid colors on chrome mordants, mordant dyes on alum mordant, tin mordant, etc. The vat colors, including the Cibas, Helindones, Algoles, Indanthrenes, etc., are very thoroughly taken up. The laboratory work which supplements the lectures comprises a large number of experiments, samples from which are mounted for comparison.

The second term is devoted to the study of special processes and printing. Aniline black is applied by the single bath method (hot and cold), by the "aged" or copper black method, and by the steam or prussiate method. The application of paranitraniline red to cotton yarn is next taken up, followed by a thorough study of dyeing with indigo employing the copperas, zinc-lime, and hydrosulphite vats. Mixed goods are dyed uniform or different colors by the single bath, double bath, and several bath methods. The art of printing, includ-in the preparation of the cloth, mixing the colors, choice of thick-eners, mordants, assistants, etc., and the various styles of printing are taken up. The lectures are supplemented by laboratory work. One credit, both terms (Juniors). Required of Juniors and Seniors. Two credits, both terms. Juniors in Textile Chemistry and Dyeing. Mr. Leddy.

311-312. Dyeing. Analyses of Textile Fabrics, including "siz-ing," oil and grease, mineral oil, rosin, "condition," ash, mordants, etc., are carried out, followed by analyses of dyestuffs to determine their classification, testing of dyes for tinctorial power and money value, and determinations of suitability, mixtures, etc. Color mix-ing and shade matching are very carefully carried out with thorough study. Laboratory experiments supplement this work, and the stu-dent mounts samples of his work. Procedures for waterproofing by

the "dry method," rendering fabrics "noninflammable," for testing cotton, and injured cotton, analyzing Turkey Red Oil, etc., are carried out. This is followed by a study of starches. The student devotes considerable time to the synthesis and study of intermediate products and dyes. This is designed to aid those of our students who wish to specialize in dyestuff manufacturing and sales industry. The laboratory work is devoted mainly to the study of commercial preparations which are related to dyes and intermediates. The student prepares nitro-benzene, aniline, acetanilide, p-nitracetanilide, and p-nitraniline, p-amidoacetanilide, and p-sulphanilic acid, dimethylaniline, and nitro-sodimethylaniline hydrochloride.

M-toluylene diamine, benzidene, benzal chloride, m-dinitro phenol, beta-napthol, Schaffer's salt, R salt, alpho-naphthylamine, anthraquinone, and anthraquinone sulphonic acid.

Fast Green O, Napthol Yellow S, Chrysoidine R, Orange 11, Fast Red B, and A. Chrysamine G, Benzo purpurine 4B, Napthol Black B, Auramine O, Malachite Green, Methyl Violet, Fluorescein, Methylene Blue, Induline spirit soluble, and sulphur Black T. One credit, both terms (Juniors). Required of Juniors and Seniors. Four credits, both terms. Juniors in Textile Chemistry and Dyeing. Mr. LEDDY.

401-402. Carding and Spinning. Continuation from Junior year. See course 101-102. Required of Seniors. Four credits, both terms, Textile Manufacturing; three credits, both terms, Textile Engineering.

403-404. Weaving. Continuation from Junior year. See course 303-304. Required of Seniors. Four credits, both terms, Textile Manufacturing, two credits, both terms, Textile Engineering.

405-406. Textile Designing. Continuation from Junior year. See course 205-206. Three credits, both terms. Required of Seniors in Textile Manufacturing.

407-408. Cloth Analysis. Continuation from Junior year. See course 208. One credit, both terms. Required of Seniors in Textile Manufacturing.

409-410. Dyeing. Continuation from Junior year. See course 309-310. Required of Seniors. Two credits, both terms, for Textile Manufacturing; three credits, both terms, for Textile Chemistry and Dyeing.

411-412. Dyeing Laboratory. Continuation from Junior year. See course 311-312. Required of Seniors. Two credits, both terms, Textile Manufacturing; four credits, both terms, Textile Chemistry and Dyeing.

For Short Course

11-12. Carding and Spinning. Lectures and recitations; practice in operating card and spinning room machinery. The lectures will cover as many machines as possible during the year, and the practical work will consist of operating the various machines. One credit, both terms, both years. Mr. PRICE.

21-22. Weaving. Lectures on construction of plain, twill, satin, and other looms will be given. Lectures begin with the construction of plain loom, first taking up the principal movements in weaving, then the various secondary or auxiliary movements, and the relation and timing of one movement to another. Practical work will consist of operating plain, twill, satin, gingham, and other looms. Three credits, both terms, both years. Professor NELSON, Mr. PRENTIS, Mr. HART.

31-32. Textile Designing. Lectures and practice in designing. Methods of representing weaves on paper. The foundation weaves, plain, twill, and satin are the first subjects studied, advancing to derivate and other weaves. Color and other ornamentation of weaves and fabrics. Combination of different weaves and their effect in the cloth. Two credits, first term; one credit, second term, first year; three credits, first term; two credits, second term, second year. Mr. PRENTIS.

42. Cloth Analysis and Fabric Structure. Calculating particulars of cloth from data ascertained from samples. Reed and harness calculations. Drafting and pattern chain building. Calculations to obtain quantities of warp and filling in different fabrics. Yarn calculations. System of numbering cotton, woollen, worsted, silk, and linen yarns. One credit, second term, both years. Mr. PRENTIS.

VETERINARY MEDICINE

For Four-Year Courses

The Department of Veterinary Medicine offers the first two years of a four-year course in Veterinary Medicine; the subject of Animal Diseases to Seniors in Agriculture, also Veterinary Hygiene and Sanitation; the subject of Animal Diseases to the second year short course and Rehabilitation students; and the subject of Diseases of Livestock in the two-weeks course in Agriculture. A one-week graduate course in Veterinary Medicine is offered annually, open to the graduate veterinarians in the State.

301-302. Veterinary Anatomy. This subject will deal with the study of the skeleton, including bones and joints, and of the muscles.

A complete dissection of the muscles of the horse will be made. Six credits, first term; four credits, second term. Required of Juniors in Veterinary Medicine. Fee, $2. Professor REEDER.

303-304. Histology. A microscopical study of the tissues of the body; treating of the cell as the unit of structure, and of its functions; also of tissues, their classification, and their relation to the structure of organs. From dissections and proximity to slaughter-house, abundance of histological material of various animals is obtainable. Three credits, first term; two credits, second term. Required of Juniors in Veterinary Medicine. Fee, $1. Professor REEDER.

305. Materia Medica. This study of the inorganic drugs used in comparative medicine will treat of their classification, composition, physiological actions, and doses. Three credits, first term. Required of Juniors in Veterinary Medicine. Professor REEDER.

401. Veterinary Hygiene and Sanitation. The subject-matter will deal specifically with some phases of the physiology of the following systems: digestion, reproduction, locomotion, respiration, and circulation in domestic animals. The diseases which affect the organs of the different systems will be enumerated and suitable hygienic measures to avoid such troubles will be discussed. Three credits, first term. Required of Seniors in Agriculture. Professor REEDER.

402. Materia Medica and Pharmacy. Course 305 as described above will be continued by a study of organic drugs. The Pharmacy course will include prescription writing and laboratory work in the preparation, compounding, and preserving of medicines. Three credits, second term. Fee, $1. Required of Seniors in Veterinary Medicine. Professor REEDER.

403-404. Veterinary Physiology. A comparative study of the bodily functions of the various domestic animals is made, with special reference to digestion, respiration, circulation, reproduction, and secretion. Three credits, both terms. Required of Seniors in Veterinary Medicine. Professor REEDER.

405-406. Veterinary Anatomy. A continuation of course 301-302. A study of the digestive, respiratory, circulatory, urinary, reproductive, and nervous systems will be made, with dissections of each in the horse. Five credits, both terms. Required of Seniors in Veterinary Medicine. Fee, $2.

407-408. General Pathology. As contrasted with special or systematic pathology, this course will treat of general causes of disease, congenital, postnatal, infectious, and noninfectious; of morbid and reactive tissue processes, congestion, inflammation, fever, im-

munity, etc.; of progressive tissue changes, regeneration, tumors, etc.; of regressive tissue changes, degeneration, necrosis, death, etc. A large number of specimens of diseased organs and tissues already present in the museum, and opportunity for collecting others from clinics and abattoir, insure plenty of material to demonstrate various macroscopical and microscopical tissue changes. Three credits, both terms. Required of Seniors in Veterinary Medicine. Fee, $1.

410. Animal Diseases (Prevention and Control). Many diseases of both man and animal are preventable, and never before was the old adage "An ounce of prevention is worth a pound of cure" more applicable. To effectively prevent and control most of our diseases, it is essential to know something of their causes, habits, mode of entering the body, and bodily resistance (immunity). The above phases will be largely considered in this course. Two credits, second term. Elective for Seniors in Agriculture. Professor REEDER.

For Two-year Course

22. Animal Diseases. This course must not be confused with course 410. In this the principles of the make-up and working of the body must be studied in a general way in order to understand the several abnormal conditions to be discussed. The more common preventable abnormal conditions will be considered first; then will follow a short discussion of the several contagious and infectious diseases, their prevention and control. Two credits, second term. For second year Short Course and Rehabilitation students. Professor REEDER.

For Winter Course

Diseases of Livestock. Lectures will briefly cover elementary anatomy, physiology, hygiene, sanitation, and common diseases of animals. Special emphasis will be laid upon the general causes of diseases, the means or measures of preventing and controlling them, and things not to do. Professor REEDER.

For One-week Graduate Course

Open to graduate veterinarians only. Alterations in the following outline of subjects may be made to suit the wishes of those attending. The subject-matter in each case will be condensed so as to cover the entire field during the week.

Animal Husbandry. Judging, feeding, and breeding. This course is given by the Animal Husbandry Division. The Livestock Judging will embrace the points to be considered in determining the fitness of animals for specific purposes. The Stock Feeding instruction will cover the various feeds available, their composition, and the

methods of compounding balanced rations. The Animal Breeding lectures will discuss the selection, the laws of breeding, and the management of breeding animals.

Dairying. This course is offered by the Dairy Division. The equipment necessary for a dairy, the methods of conducting a dairy business, and the composition of milk will be the subjects of study. Laboratory demonstrations will be given to illustrate methods of testing and standardizing milk and cream, also the scoring of butter.

Parasites and Parasitic Diseases. Three or more lectures will be given on this subject, taking up the more important internal and external parasites, using for the purpose of demonstration one of the largest private collections of parasites in this country. Symptoms of parasitism, methods of recognition of the parasites, lesions produced, and means of eradication will be thoroughly discussed. Professor KAUPP.

Common Diseases of Poultry. Three or more lectures will be given on this subject, taking up the more troublesome diseases, both parasitic and bacterial, making actual demonstrations from the poultry and pathology research laboratory run jointly by the College and the Station. Professor KAUPP.

Meat and Milk Inspection. The subject will be covered in the discussion of an outline indicating what inspection for Southern towns should consist of. The work will be demonstrated by visits to the municipal abattoir, the city market, and some of the better dairies about Raleigh.

Anatomy and Dissection. Condensed outlines of the different anatomical systems will be given, such as of skeleton, including joints, and muscular, nervous, digestive, circulatory, respiratory, urinary, and genital systems. Abundance of well-injected equine subjects will be available for dissection of all parts, but particular attention will be given those areas involved in special surgery.

Veterinary Physiology. The physiology of digestion, nutrition, and reproduction has made much advancement in the past five years. It is, therefore, essential that we understand the latest and the most authentic scientific findings. Lectures will be given summarizing the essentials of these subjects. Laboratory methods, also, will be used to demonstrate the actions of the digestive fluids, and prepared specimens shown to illustrate, as far as possible, the phenomena of reproduction. The remaining time will then be given to a practical discussion of the respiratory and circulatory systems. Professor REEDER.

Clinical Diagnosis and Clinics. The subject-matter will be given in the form of a synopsis of the essential factors concerned in determining the alterations in each of the anatomical systems and regions of the animal body. Demonstrations will be made in the conduct of clinics at the veterinary hospital and by various laboratory and field methods of diagnosis. It is expected that there will be opportunity to show typical reactions from use of intradermal and ophthalmic tuberculin. Drs. KOONCE, REEDER, KAUPP.

Open Discussions on Surgery, Practice, Meat and Milk Inspection, etc. Leaders of each chosen by those attending. Stated periods will be appointed for each of the above subjects on which round-table discussions of the veterinarian's everyday problems will be held.

VOCATIONAL EDUCATION

For Four-year Courses

201. Psychology. An introductory course to general psychology. It is the purpose of this course to give the student a basis for the interpretation of human conduct in terms of the psychological principles substantiated through modern experimental psychology. The course will treat such determining factors of human behavior as the following: structure and function of the nervous system; instinctive tendencies; emotional behavior; habit and habit formation; and reflective thinking. A number of laboratory experiments upon native reactions, habit formation, and learning will be performed. Three credits, first term. Required of Sophomores in Business Administration; elective for Juniors in Engineering. Associate Professor WILEY.

301-302. Introduction to Education. The purpose of this course is to bring the student to a realization of the educational needs of society and the individual, and give him some conception of the fundamental principles of scientific educational procedure. The course begins with a study of the aims and values of education and their application to the organization of courses of study and curricula in rural secondary schools. A study is made of the bases for the present tendencies in education—economic, social, and psychological. The practical application of psychological principles and facts in high school agricultural teaching consumes about one-half of the time given to the course. Some of the topics considered in this connection are original nature and its modification, attention, interest, habit, memory, imagination, individual differences, transfer of training, adolescence, and practical methods of study. One laboratory exercise a week provides concrete illustration of the principles studied, and gives the students ability to understand and interpret educational

measurements and statistics. Three periods throughout the year. Required of Juniors in Vocational Education. Elective for all other Juniors in Agriculture except Veterinary Students. Associate Professor WILEY.

401. Principles of Teaching. This course deals with the nature of the learning process and its relation to teaching methods; nature of interest, how aroused and sustained; formal and socialized recitation; how to study and methods of supervising study; project teaching; discipline; lesson planning; use of the double period; illustrative material; marking pupils' work; use of the survey in teaching; questions and questioning; assignment of the lesson; organization and procedure of laboratory and field exercises; value of reviews; purposes and kinds of examinations. Three periods, first term. Required of Seniors in Vocational Education. Professor COOK.

402. Rural School Organization and Administration. The purpose of this course is to give the students an insight into the administrative problems confronting principals of rural high schools which offer vocational work. The appropriate administrative principles will be presented in connection with such determining factors as the following: special characteristics of high school pupils; needs of the rural community; criterion for determining the value of school subjects; financial and legal status of education in North Carolina; equipment; development of secondary education; and articulation with elementary schools and colleges. Three credits, second term. Required of Seniors in Vocational Education. Associate Professor WILEY.

403-404. Methods of Teaching Agriculture, Observation and Practice Teaching. This course aims to give the specific helps needed by a teacher of agriculture. The selection and use of the materials and devices, such as classroom and laboratory fixtures and apparatus, illustrative materials, and methods of cataloguing bulletins and other material are considered. Emphasis is put on the selection and organization of subject-matter, and the various methods employed in teaching agriculture, laboratory methods, the use of the field and farm in instruction, supervised study, planning and supervising home projects, and community activities. Some systematic work is done in schoolroom observation. Provision is made for the students to do practice teaching in near-by agricultural schools. As far as possible, the work of this course will correlate with the work in Principles of Teaching. Three credits throughout the year. Required of Seniors in Vocational Education. Professor COOK, Mr. COGGIN, and Mr. ARMSTRONG.

405-406. Seminar. This course will consist of reports and discussions of current educational affairs, including experimental work in education, new movements, and some of the important educational problems. One credit, both terms. Elective for Seniors in Agriculture. Professor Cook and members of the staff.

408. Methods of Science Teaching. It is the purpose of this course to prepare students for teaching science courses in high schools. The course will treat such matters as the following: organization and presentation of science materials, with special attention to the content and organization of general science; planning and directing laboratory exercises; sources of laboratory and illustrative materials; and proper handling of notebook work. Three credits, second term. Elective for Seniors.

Course for Graduates

501-502. Problems in Teaching. A teacher in service may pursue a graduate course in special problems in teaching in absentia. This course will deal specifically with his problems as a teacher, the nature and content of the course to be determined by the needs of each individual. Considerable of this work will be carried on by correspondence, but frequent visits will be made by members of the department for consultation and checking up on the work. Reports will be required periodically. Credit, 1 to 3 credits a term. For Graduates. Professor Cook and members of the staff.

ZOOLOGY AND ENTOMOLOGY

For Four-year Courses

201-202. Elementary Zoology. An elementary study of all forms of animals, with special reference to the more important economic groups, is given by text-book, library, laboratory, and field work, with supplementary lectures. This course is designed to give the student a general knowledge of the animal kingdom, and to lay the foundation for the special work in Agriculture which follows. Three credits, both terms. Required of Sophomores in Agriculture. Prerequisite for all other courses in the department. Fee, $2. Professor Metcalf, Assistant Professor Eckert, Mr. Eddy.

302. Genetics. A course devoted to a study of the basic principles of cell morphology, cell division, maturation, and fertilization as a basis for the study of heredity. In addition to the study of the cell the student will study the various laws of heredity with special reference to Mendel's law. The students will be required to carry on and analyze their own breeding experiments with fruit flies, and to observe and analyze the breeding experiments with other animals.

Given jointly by the Departments of Zoology and Botany. Prerequisites, Botany 101-102 and Zoology 201-202. Three credits, second term. Required of Juniors in Agriculture. Professor METCALF, Professor WELLS, Mr. EDDY.

303-304. Comparative Anatomy. This course will be devoted to a study of the comparative anatomy of typical vertebrates. System of organs will be studied in the various classes and the development and interrelation pointed out. Three credits, both terms. Required of Juniors in Biology. Professor METCALF, Mr. EDDY.

306. Economic Entomology. The elements of insect anatomy, classification, and development as a foundation for economic entomology is covered by text-book, lectures, and laboratory work, together with systematic study of the injurious insects of farm crops, farm animals, orchard, shade, and ornamental plants, and a study of the insect enemies of the principal truck and garden crops from the standpoint of their life histories and control. Three credits, second term. Elective for Juniors in Agricultural Chemistry. Required of all other Juniors in Agriculture except students in Veterinary Medicine. Professor METCALF, Assistant Professor ECKERT.

307-308. Economic Zoology. A study of the principal groups of animals in their relation to man, both from the standpoint of crops destroyed and diseases carried. Three credits, both terms. Elective for all Juniors in Agriculture, except those in Agricultural Chemistry and Veterinary Medicine. Professor METCALF, Assistant Professor ECKERT.

309-310. Evolution. This course will be devoted to class and laboratory study of the processes of evolution, together with an historical review of the theories of evolution as applied to man and the other animals. Three credits, both terms. Elective for Juniors in Agriculture. Professor METCALF, Mr. EDDY.

401-402. Vertebrate Embryology. This course will cover the comparative embryology of the principal groups of vertebrates, together with a discussion of the comparative anatomy of the vertebrates. Three credits, first term. Required of Seniors in Biology. Three credits, second term. Required of Seniors in Veterinary Medicine. Elective for all other Seniors in Agriculture. Fee, $2. Professor METCALF, Mr. EDDY.

403-404. Apiculture. The first term will be devoted to a study of the life history and anatomy of the honey bee and preparation of colonies for wintering. The second term will be devoted to spring management, comb and extracted honey production. Three

credits, second term. Required of Seniors in Biology. Three credits, either term. Elective for all other Seniors in Agriculture. Professor METCALF, Assistant Professor ECKERT.

405-406. Rural Sanitation. A course in which the relation between animals, especially insects, and sanitation of the farm and farm home are discussed. These discussions embrace the methods of disease transmission and spread by insects, and through foods and water; air and ventilation; sewage and refuse disposal; the transfer of disease through careless insanitary methods; disinfection and quarantine; sanitation of summer camps, schools, and other community units; industrial and occupational hygiene; rural and urban conditions; vital statistics and health education. One credit, both terms. Elective for all Seniors in Agriculture, except Veterinary students. First term, Professor METCALF; second term, Dr. KAUPP.

407. Scientific Illustrating. A course in the various methods of illustrating, with special reference to their use by the biologist. The student is drilled in the fundamental importance of the outline, of color, of composition, and of perspective. The student may then elect to study any of the following methods of finishing drawings: pen and ink, pencil, charcoal, wash, water color, and oil color. Chart making, casting, modeling, and wax plate reconstruction are also considered. Three credits, first term. Elective for Seniors in Agriculture. Professor METCALF.

408. Scientific Photography. This is a course that emphasizes the importance of photography in science. Exposure, composition, the preparation of the negative for printing, printing, enlarging, making lantern slides, and color photography are all considered. Three credits, second term. Elective for Seniors in Agriculture. Professor METCALF.

Course for Graduates

501-502. Zoology. This course is designed to fit the student for research or teaching in either Zoology or Entomology. The student may elect from the following groups: (1) Invertebrate Morphology; (2) Comparative Anatomy; (3) Vertebrate Embryology; (4) Invertebrate Embryology; (5) Ecology; (6) Animal Micrology; (7) Cytology; (8) Systematic Entomology; (9) Medical and Veterinary Entomology; (10) Parasitology; (11) Economic Entomology of fruit trees, shade trees, greenhouse, corn, cotton, or tobacco. Four or eight credits. Professor METCALF.

For Two-year Course

11-12. Animal Life. A course designed for the two-year student in which the fundamental facts of animal structures and animal

activities are presented, as a basis for further work in the specialized courses in animal feeding, animal husbandry, and poultry. Special emphasis will be laid on such important activities of the body as circulation, digestion, excretion, and reproduction, which will be considered from the standpoint of animal breeding. The economic importance of birds, rats and mice, and other animals, especially those which carry or cause human or animal diseases, will be examined and studied in the laboratory. Three credits, both terms, first year. Professor METCALF, Mr. EDDY.

21. Farm Insects. This is a short course in which the beneficial and injurious insects are discussed in their relations to the farm. The various insecticides and methods of spraying are also included. Three credits, first term, second year. Professor METCALF, Assistant Professor ECKERT.

For Winter Course

Insects. The aim of this course will be to teach a farmer to recognize his insect friends and enemies. We pay a much greater tax to insects each year than we do to the State and local governments in taxes for several years, and yet there are many farmers who know practically nothing about insects. The farmer should know something about the lives of these interesting animals and how to control the injurious forms.

The course will be illustrated by specimens, charts, and photographs, in order to familiarize the farmer with the principal insects attacking farm crops and fruit trees.

VI. GRADUATE COURSES

RULES FOR ADVANCED DEGREES

Two degrees are conferred: The Engineering Degree to nonresident graduates of the engineering courses, and Master of Science to resident students pursuing graduate work.

ENGINEERING DEGREES

1. The degree of Civil Engineer, Mechanical Engineer, or Electrical Engineer may be conferred upon graduates of the several engineering departments of the College not sooner than three years after graduation.

2. Each candidate for an engineering degree must file his application for enrollment not later than October 5.

3. He must file with his application a statement of the work he has done since graduation and the title of the thesis which he will present.

4. The record of the work and the subject of the thesis must be approved by the Faculty's standing committee on graduate studies before the applicant will be enrolled as a candidate for a degree.

5. No work done as a teacher shall be credited toward this degree.

6. The completed thesis must be submitted in approved form not later than May 1. Reports, designs, or drawings made in the regular course of his employment will not be accepted.

7. A candidate must submit with his thesis tangible records of the work he has done and upon which his application for the degree is based, such records to consist of complete drawings, detailed drawings, photographs, records of tests, or other such matter as will show the character of the work done and indicate the degree of responsibility that has been placed upon him.

8. If the record of the work done be approved and the thesis accepted by the Faculty, the candidate, upon notification, must present himself for examination not later than the Saturday preceding the annual commencement. The examination shall consist of oral questions on the subject-matter of the thesis and on the work done by the candidate since graduation.

MASTER OF SCIENCE

The degree of Master of Science will be conferred on graduate students who fulfill the following requirements:

1. The candidate must have received the Bachelor's degree from this College or another institution having an equivalent course of study.

2. Not less than two years must intervene between the conferring of the Bachelor's degree and the Master's degree, unless the candidate has devoted his time exclusively to graduate study.

3. A course of study consisting of one major and two minors, aggregating sixteen periods, must be pursued during residence at the College, each period representing not less than 90 hours of actual work.

4. The major subject, covering eight periods, shall be strictly graduate work and selected in that department in which the Bachelor's degree was taken.

5. The two minor subjects, covering four periods each, shall be chosen from departments allied to the department in which the major subject is chosen. The work of a minor subject shall be of a grade not lower than that of the Junior year in those departments.

6. Work which has been done previous to receiving the Bachelor's degree or which has been accepted as credit towards any degree received shall not be accepted for credit towards the Master's degree at this College.

7. The major and minor subjects must be completed satisfactorily by May 1st preceding the conferring of the degree, at which time also must be presented in its complete form a satisfactory thesis, the theme of which must have been approved by the 5th day of October previous thereto.

8. The candidate must pass a satisfactory oral examination upon his thesis, major and minor subjects, before an examining committee composed of the professors in charge of the major and minor subjects, one or more members of the Graduate Studies Committee, and one or more other members of the Faculty, said examining committee to be appointed by the Faculty upon the nomination of the Graduate Studies Committee.

9. In case the applicant be employed by the College, Experiment Station, or State Department of Agriculture, he shall not be allowed to receive during any term credit for more than four periods, to be distributed as follows: one minor, or half a major, or half a minor and one-fourth of a major.

10. No work done as a teacher shall be credited as work towards the degree.

11. At least eight periods must be devoted to work in the laboratory, field, greenhouse, dairy, or barn.

12. The thesis must involve some original work. References to literature should as far as possible be to original sources, and all citations should follow the rules prescribed for the *Journal of Agricultural Research.*

13. Candidates for advanced degrees shall comply with the regular registration rules for undergraduates, and must register for each term for which they wish to receive credit.

14. In no case will credit be allowed for the fall term unless the candidate shall have filed with the Registrar an approved course of study by October 5. In no case will credit be allowed for the spring term unless the candidate shall have filed with the Registrar an approved course of study by February 5.

15. Graduate credit will be allowed for work of graduate grade done during the summer session, the amount of such credit not to exceed three units during any one session, the total credit obtained in this way not to exceed six units, provided the candidate register and file an approved course of study not later than the first Monday of the summer session.

CORRESPONDENCE COURSE IN VOCATIONAL EDUCATION

16. Graduate credit will be given for a course of special problems and methods, conducted by correspondence with the Department of Vocational Education, to graduates of this College and colleges of equal standing who are actually engaged in teaching, under the following conditions:

(a) The candidate must comply with the rules governing registration and the filing of an approved course of study.

(b) Periodic reports of the progress of the work must be made to the Department of Vocational Education, either in writing or by visitation.

(c) A written examination must be passed at the end of each term before credit is allowed. A candidate will not be allowed to register for a second term of correspondence work, who has not satisfactorily completed the previous one.

(d) Not more than three credits may be obtained by correspondence during any one college term, and a total of not more than six credits towards the Master's Degree may be obtained in this manner.

FORM OF THESIS

The thesis must be presented on unruled white paper, 8⅛ by 11 inches in size, twenty-pound Persian bond or the equivalent. A suitable title-page, printed or typewritten, must be prepared. The thesis must be neatly typewritten, properly paged, leaving a margin of 1½ inches on the left for binding, the writing to be on one side of the page only. All drawings or diagrams must be neatly and carefully prepared, and where the size of paper necessary is larger than that of the page it must be of such size as conveniently to fold in with the thesis.

The thesis shall become the property of the College and will be placed on file.

PUBLICATION OF THESIS

Theses for advanced degrees or extracts therefrom may be published only under the supervision of the Graduate Studies Committee, which committee will decide upon the place of publication and matter to be published. In connection with the publication there is to appear the following statement, or words to that effect: "Extracts from a thesis submitted to the Faculty of the North Carolina State College of Agriculture and Engineering in partial fulfillment of the requirements for the degree of ....." Acknowledgment may be made in the body of the thesis for assistance rendered, or the article may appear as a joint publication with some member of the Faculty should facts justify the same.

VII. SUMMER SESSION

The ninth summer session will begin with registration on June 13 and close with the final examinations on July 26, 1922.

During the summer session courses will be arranged for teachers, for college entrance, and for college credit. These courses will be open alike to women and to men who fulfill the requirements for admission. We shall also have courses in Vocational Agriculture and in Cotton Classing, and a Demonstration School for some of the elementary grades.

The courses for college entrance are open to those who have completed the three years work of a standard high school, and have been enrolled for the fourth year's work. Those who failed to complete one or two subjects required for graduation from a high school may make up these subjects during the summer session and be enabled to enter college in the fall. Not more than one unit of high school credit may be added in this way.

The courses for college credit are open to students who have attended an "A" grade college during one or more previous sessions. These courses will be very helpful to students in removing conditions and thereby enabling them to enter their classes regularly with the opening of the fall session. It is a well recognized fact that students who are not in regular standing in their classes usually have difficulty in arranging schedules, and, on the whole, their work falls short of being satisfactory to themselves and to their teachers.

During the 1921 summer session courses in Cotton Classing were offered. These courses were arranged with the view of helping the producer to judge good staple, and to turn his attention, in consequence, to the growing of a better staple. They are also to give him training which will aid him in selling his product. Incidentally, these courses have proven very helpful to the buyer, also, and producers and buyers are both welcome to these courses. While we have no requirements for admission to the Cotton Classing courses, yet we think that it is proper to say that these courses are arranged for young and middle-aged men, from 23 to 50 years of age, who have a good English education. They are not intended for boys nor for men who lack earnestness of purpose.

The Demonstration School is intended primarily to be of assistance to the members of the Faculty in showing teachers the best methods of presenting a subject, interesting pupils, and inspiring them to greater effort. Incidentally, it enables the children who are members of the school to come into contact with unusually skilled teachers. Instruction is limited to the first, second, fourth, and fifth

grades. There is no charge for tuition for children in the Demonstration School, but the pupils are expected to furnish their own books and other school supplies.

Teachers make up by far the greater number of those attending summer schools, and it is for the benefit of these, to a large extent, that the college has established a summer session. The teachers' courses are open to graduates of standard high schools and to holders of Provisional Elementary, Elementary B, and higher State certificates. Graduates of a standard high school who have not received professional credit may, by attendance and the completion of a satisfactory course in one summer school, receive the professional credit necessary for the Elementary Certificate, Class B. Teachers holding Elementary B and higher State certificates may receive the credits necessary for the renewal of those certificates or for raising them to a higher class. Courses are arranged by which attendance at four summer sessions may be accepted as the equivalent of one year of college work, or 24 semester credits.

There will be special courses for Vocational Agricultural students, following the general plan of those given heretofore. There will be courses in School Administration planned for superintendents, supervisors, and principals. There will be general professional courses relating to high school work, to grammar grade work, and to primary work, and special professional courses relating to secondary and elementary subjects.

A few graduate courses will be offered leading to advanced degrees.

This school is an approved State summer school, and the courses offered have the approval of the State Department of Education.

CATALOG OF THE SUMMER SESSION

The courses to be given during the coming session will, in the main, be those given during the 1921 session. There will be additional courses, however, in practically every group. These will be shown in detail in the catalogue, a copy of which may be had upon application to the Director.

The Nineteen-Eleven, South, Watauga, Fourth, Fifth, and Sixth dormitories will be reserved for ladies exclusively, and will be in charge of chaperons who will at all times be glad to advise and assist those who are under their care. Watauga Hall will be reserved for men.

The Y. M. C. A. building will be the social and recreational center of the school. This building contains a reading room, an auditorium, several reception rooms, bowling alleys, a gymnasium with modern equipment, and a swimming pool, besides a limited number of sleeping rooms.

Colonel Fred A. Olds will personally conduct excursions each Saturday to the many points of interest in Raleigh and its environs.

The recreational features of the school life will be emphasized. All will have an opportunity to participate in games, community singing, and entertainments, and to take part in story-telling circles which will be held upon the campus in front of Holladay Hall several evenings a week immediately after supper. Motion pictures will be shown at the Y. M. C. A. Entertainments of interesting and instructive nature will be given on July 4 and at the end of the session. Lectures will be given comprising a wide range of educational and cultural subjects.

Members of the Summer Session will have access to the College Library and to the Raney Library and State Library for reference work.

The College infirmary, in charge of the hospital matron, will be conducted for the school. The College physician will make daily visits to those who may be sick in the infirmary.

The Teachers' Bureau will, without charge, assist school officials to secure teachers and members of the school to find positions. In other words, the function of the Teachers' Bureau will be to bring the position and the applicant together.

ATTENDANCE

During the 1921 session there was an enrollment of 576 in teachers' courses, 19 in college entrance courses, 42 in college credit courses, 47 in the demonstration school, 158 in courses for rehabilitation soldiers, 25 in cotton classing, and 15 others, making a total of 882, a gain of 211 (31 per cent) over the previous session. Of the 576 teachers, 379 were enrolled in the approved State Summer School, 150 in the County Summer School for Wake, Franklin, and Johnston counties, and 47 in the School of Vocational Agriculture. There were 296 men, 539 women, 24 boys, and 23 girls. There were students from 85 North Carolina counties. Seven states and three foreign countries were represented. Attendance during previous sessions was as follows: 1903, 338; 1904, 834; 1906, 753; 1917, 517; 1918, 558; 1919, 474; 1920, 671.

The summer work was organized by President Winston, in 1903, during whose administration the sessions of 1904 and 1906 were held. Dr. J. Y. Joyner was Director for the 1906 session.

In 1917 summer work was resumed under the present administration.

Fees and Expenses

The expenses of the school will be moderate, and a statement of them will be found below. Every cent paid in by student will go

toward defraying the expenses of the school, and, in addition thereto, the State will contribute an amount equivalent to from two to three dollars for every dollar paid by the student.

The expenses for the entire six weeks session will be as follows:

Tuition	$12.00
Room rent, each (two in a room)	6.00
Board	28.00
	$46.00

There will be a key deposit of 25 cents, which amount will be refunded when the key is returned. In some of the classes there will be a small fee to cover the cost of materials, which will be designated in the description of the course.

A fee of $2 is payable in making a room reservation; the remainder of the fees is payable in advance upon entering. There will be no refund of fees or charges after the first ten days.

In a limited number of cases one may be able to room alone on payment of $9 room rent.

The Summer School will be able to give dining-room positions to several young women who will be members of the school. About three hours daily will be required of each one selected for this work. The compensation for the six weeks session will be $28 each. Applications for these positions, accompanied by testimonials, should be filed with the director at once.

Many of the homes in Raleigh will supply board and lodging. A list of these will be furnished upon application.

APPLY IN TIME

For lack of space, during the 1921 session we were unable to assign dormitory accommodations to 124 applicants. An additional dormitory, with space for 70, has been completed and is available for the coming session, but even with this addition we do not expect to have dormitory accommodation for all who apply. As we expect to assign rooms in the order of application, we advise those who wish to room on the campus to apply early. We shall endeavor to do our best to accommodate those who apply later.

Address all communications relating to the school to

W. A. Withers, *Director,*
State College Station, Raleigh, N. C.

CATALOG OF STUDENTS
1921-1922
GRADUATE STUDENTS

Name	*Course*	*Postoffice*
Charles Sidney Andrews, B.E.	M. E.	Raleigh
W. D. Barbee	Agr.	Seaboard
Harwood Beebe, B.E.	C. E.	Spartanburg, S. C.
Charles Edward Bell, B.S.	Chem.	Gainesville, Fla.
George Cleveland Buck, B.S.	Agr.	Castalia
Harley Wilson Bullard, B.S.	Agr.	Chadbourn
George Edward Bush, B.E.	Tex.	Akron, Ohie
Samuel Lee Carpenter, B.S.	Agr.	China Grovo
Tung Wu Chang	Agr.	China
Harper Nicholson Cherry, B.S.	Agr.	Vanceboro
Francis West Cooke, A.B.	Phys.	Gloucester, Va.
George Chandler Cox, B.E.	E. E. and Phys.	Raleigh
Sherman Grady Crater, B.S.	Agr.	Raleigh
Paul Dexter Davis, B.E.	Agr.	Durham
Roy Styring Dearstyne, B.S.	Agr.	Raleigh
F. M. Dwight	Agr.	Vass
Alvah Dunham, B.S.	Agr.	Raleigh
Charles Patterson Eldridge, B.E.	C. E.	Raleigh
Randal Bennett Etheridge, B.S.	Agr.	Raleigh
Norman Baird Foster, A.B.	Phys.	Raleigh
Winston Payne Gwathmey, B.E.	C. E.	Richmond, Va.
Frederick Morgan Haig, B.S.	Agr.	Raleigh
Russell Peyton Harris, B.S.	Agr.	Raleigh
Thomas Devin Harris, B.E.	C. E.	Albemarle
Frank Hawks, B.E.	M. E.	Newport News, Va.
William Stephen Haywood, B.E.	M. E.	Newport News, Va.
Jesse Meacham Henley, B.S.	Agr.	Jamestown
Lowrens Jacobus Henning	Agr.	Sweetwater, S. A.
Solomon Linn Homewood, B.S.	Agr.	Raleigh
Samuel Benjamin Howard, B.E.	C. E.	Morganton
William Poo Hwan Hwang	Agr.	Canton, China
W. J. Isbell	Agr.	Newton
John Eli Ivey, B.S.	Poul.	Raleigh
Shang Wu Jen	Tex.	Shanghai, China
Eugene Carl Jernigan, B.S.	Agr.	Benson
Edward Lee Lancaster, B.S.	B. Ad.	Philadelphia, Pa.
Andrew John Leddy, B.S.	Tex.	Raleigh
Paul Thomas Long, B.S.	Agr.	Burlington
Alexander Campbell Martin, A.B.	Agr.	Raleigh

Name	*Course*	*Postoffice*
T. B. Mitchell	Agr.	———
J. H. Moore	Agr.	Middleburg
Petrus Johannes Naude	Agr.	Bethal, S. Africa
Charles Washington Owens, B.E.	C. E.	Raleigh
Thomas Branson Parks, A.B.	Chem.	Raleigh
Augustus Fleetwood Roller, B.A.	Agr.	Raleigh
Charles Anthony Sheffield, B.S.	Agr.	Linwood, R. 1
Harry Gillespie Smith, B.S.	Chem.	Raleigh
Talmage Holt Stafford, B.S.	Journ.	Raleigh
Dennis Howard Sutton, B.S.	Agr.	Bladenboro
Jew Irvin Wagoner, B.S.	Agr.	Durham
Petrus Ferreira van der Watt	Agr.	Orange Free State
Charles Westbrook Warrick, B.S.	Agr.	Woodsdale
Nathaniel Warren Weldon, B.S.	Agr.	Stovall
Carlos Frost Williams	Agr.	Raleigh
Donald Bower Wilson, B.S.	Agr.	Raleigh
Louis Ernest Wooten, B.E.	C. E.	Raleigh
Daniel Barnes Worth, B.E.	M. E.	Raleigh
Carle Clark Zimmerman, A.B., M.S.	Agr.	Raleigh

SENIOR CLASS

Wilton Leroy Adams	Agr.	Raynham, R. 1
John Thomas Alderman, Jr.	E. E.	Henderson
Thomas Watkins Alexander	Tex.	Derita, R. 14
William Franklin Armstrong	Agr.	Columbia
Gilbert Seth Arthur	Chem.	Raleigh
Vernon Leith Ashworth	Agr.	Fairview
Clarence Edward Bailes	Tex.	Charlotte, R. 11
Harold Hoyt Bangs	E. E.	Hendersonville
Charlie Raine Barber	Tex.	Greensboro
Gerald Thomas Barnes	C. E.	Kenly, R. 4
Terry Fulton Beamer	Agr.	Mount Airy, R. 3
Guy Hibert Bennett	E. E.	Morehead City
Earl Ray Betts	Tex.	Raleigh
William Wade Blakeney	Tex.	Monroe, R. 4
Julian H. Blue	C. E.	Raeford
Garnet Lee Booker	Agr.	Greensboro, R. 7
Benjamin Avery Brackett	M. E.	Landrum, S. C.
Robert Edward Brackett	Agr.	Nealsville
Olin Link Bradshaw	E. E.	Lenoir
Clyde Davis Buchanan	E. E.	Dillsboro
Charles Ormonde Butler	M. E.	Wilmington
Doyle Leroy Cannon	E. E.	Rosemary
Julian Walker Cantrell	Tex.	Winston-Salem

Name	*Course*	*Postoffice*
Addis Pittard Cates	Agr.	Mebane, R. 3
George Bryan Cherry	C. E.	Windsor
Pow King Chu	Tex.	Shanghai, China
Colin Frank Churchill	E. E.	Kinston
Clinton Albert Cilley	M. E.	Hickory
Edwin Osborne Clarkson	Tex.	Charlotte
Quincy Ethan Colvard	Agr.	Wilbar
Flave Hart Corpening	M. E.	Brevard
William Oliver Crary	M. E.	Brevard
Robert Lewis Davis	Tex.	Henderson, R. 4
Harold Albert Deal	Tex.	Randleman
Robert Eston Dunning	Agr.	Aulander
Fred Graham Elliott	Agr.	West Durham, R. 1
John Franklin Ervin	E. E.	Catawba
Paul Koonce Ewell	M. E.	Elizabethtown
Dwight Moody Farmer	Agr.	Bailey, R. 2
Ralph Powell Farrell	Tex.	Leaksville
Averette Gaston Floyd	Agr.	Fairmont, R. 1
Alva Justin Floyd	C. E.	Fair Bluff
Giles Pittman Floyd	M. E.	Fairmont, R. 3
Tao Shen Foo	Tex.	Shanghai, China
John Elliott Fortescue	M. E.	Scranton, R. 1
Josephus Coston Foscue	Agr.	Maysville
William Franklin Freeman	C. E.	Norfolk, Va.
John David Gill	C. E.	Henderson, R. 4
Julian Austin Glazener	Agr.	Raleigh
William Franklin Graham	M. E.	Rennert, R. 1
Luther Wilson Greene	Chem.	Norfolk, Va.
John Dwight Groome	Agr.	Greensboro, R. 3
Walter Durham Hampton	E. E.	Brevard
Alexander Caswell Hamrick	M. E.	Asheville
William Thomas Harding, Jr.	M. E.	Raleigh
Lera Rhinehart Harrill	Agr.	Lattimore
Ernest Baton Harris	C. E.	Spencer
James Calhoun Harris, Jr.	Tex.	Anderson, S. C.
William Norwood Hicks	M. E.	Durham, R. 4
Henry Selby Hill	E. E.	New Bern
James Oscar Holt	Tex.	Greensboro, R. 2
Edward Everett Inscoe	E. E.	Castalia, R. 1
Henry Taylor Ivey	C. E.	Proctorville
Clyde Alfred Jackson	Agr.	High Point, R. 2
Donald Burton Jenkins	C. E.	Greenville
John Frank Johnson	Agr.	Mount Airy, R. 3
George Shuford Johnston	Tex.	Hickory
Luther Jackson Jordan	C. E.	Elm City, R. 1

Name	*Course*	*Postoffice*
Heath Owen Kennette	Tex.	Mooresville
Robert Morris Kimzey	Agr.	Horse Shoe, R. 4
Henry Jefferson Kinard	M. E.	Epworth, S. C.
Paul Frederick Lancaster	C. E.	Winston-Salem
Lewis Burleyson Laughlin	Tex.	Concord
Leonidas Rosser LeGwin	C. E.	Wilmington
Hiram Samuel Lemmond	C. E.	Indian Trail
William Bennett Liles	Agr.	Lilesville
Harvey Ellis McComb, Jr.	Agr.	Hickory
John Alexander McIntyre	Agr.	Laurinburg, R. 3
Owen Clinton McKinnie, Jr.	M. E.	Winston-Salem
William Gordon McKoy	C. E.	Old Fort
John Brown McLaughlin, Jr.	Tex.	Charlotte
John Frank McLeod	Agr.	McBee, S. C.
Herbert Raymond Madry	Agr.	Scotland Neck
Ralph Faison Matthews	E. E.	Raleigh
Sidney Franklin Mauney, Jr.	Chem.	Old Fort
Frank Barnard Meacham	Agr.	Statesville, R. 6
William Thomas Midyette	Agr.	Lake Landing, R. 1
Robert Lathan Mills	Chem.	Mooresville
George Walker Mong	C. E.	Goldsboro
William Martin Monroe	Agr.	Laurinburg, R. 2
Thomas Gilbert Moody	C. E.	Waynesville, R. 2
James Wright Moore	E. E.	Trenton, S. C.
Eli John Morgan	Agr.	Benson
Paul Lyman Moses	Agr.	Higdonville
James Lloyd Nicholson	C. E.	Richlands
Koyt Samuel Nissen	M. E.	Winston-Salem
John Hugh Norwood, Jr.	C. E.	Norwood
James Gordon Olive	Agr.	Apex, R. 3
Ryland Wrenn Olive	M. E.	Greensboro
Dolphin Dunnaha Overton, Jr.	M. E.	Greenville
Thomas Needham Park	C. E.	Raleigh
George Thomas Parker, Jr.	E. E.	Kelford
Earl Deaton Pasour	Agr.	Dallas, R. 1
Charles Fisher Paxton, Jr.	Chem.	Charlotte
Calvin Winchester Pegram	Agr.	Lincolnton
Nathaniel Dunn Peirson	C. E.	Enfield
Wesley Irwin Pickens	Tex.	Charlotte
Watson Odean Powell	E. E.	Portsmouth, Va.
Charles Franklin Reisner, Jr.	Tex.	Salisbury
Thomas Kesler Roberts	C. E.	Red Springs
Henry Burton Robinson	E. E.	Columbia, S. C.
Edward Wolfe Ruggles	E. E.	Southern Pines

Name	*Course*	*Postoffice*
Alfred Leavy Sears	Tex.	Raleigh
Henry Marchand Shaw, Jr.	M. E.	Oxford
Emory Gordon Singletary	C. E.	Proctorville
R. D. Van Sisk	M. E.	Franklin
Walter Thomas Sledge	Tex.	Fairview
William Weaver Starr	E. E.	Wilkesboro
William Little Steele, Jr.	Tex.	Rockingham
Robert McIntosh Stikeleather	M. E.	Taylorsville
William Alexander Stillwell	M. E.	Webster
Thomas Francis Stradley	E. E.	Asheville
Samuel Hector Strickland	C. E.	High Point
Ezra Carl Tatum	Agr.	Mocksville, R. 4
Carl Taylor	C. E.	Wilson
James William Tolar	Tex.	Cedar Grove, R. 2
Francis Asbury Townsend	Tex.	Ninety-Six, S. C.
Richard Dent Turner	C. E.	North Wilkesboro
Friel Tate Vance	E. E.	Plumtree
Alexander Holloway Veazey	Agr.	Creedmoor, R. 3
William Richard Wearn, Jr.	C. E.	Charlotte
Henry Harward Weaver	C. E.	Durham
William Burgess White	Agr.	Olin
Herbert Lafayette Whitesell	Agr.	Gibsonville
Benton Wray Williams	M. E.	Angier
Thomas Smith Williams	C. E.	Buie
Charles Rea Wilson	C. E.	Jackson Springs
Ralph Harper Wilson	Tex.	Wilsons Mills
George Luther Winchester	Agr.	Summerfield, R. 2
Albert Macon Worth	C. E.	Raleigh, R. 2
David Ralph Wright	E. E.	Hunting Creek

JUNIOR CLASS

William Roy Alexander	E. E.	Montreat
Samuel Adolph Allred	Agr.	Staley
Willard Roy Anderson	Agr.	Mars Hill
Edward Michael Arendell	E. E.	Morehead City
Frank Kugler Baker	M. E.	Norfolk, Va.
William Jackson Barber	M. E.	Reidsville
William Horace Barnhardt	Tex.	Concord
Edward Doyle Barr	E. E.	Creston
Julian Frost Baum	Chem.	Poplar Branch
Robah Fetus Baynes	Tex.	Hurdles Mill, R. 2
William Foy Beal	C. E.	Rocky Mount, R. 3
George Harrison Becton	Agr.	Goldsboro, R. 1
Lawrence Duffy Bell	C. E.	Pilot Mountain

Name	*Course*	*Postoffice*
Joseph Kelley Blum	Chem.	Reidsville, R. 2
Thomas Franklin Bostian	Agr.	China Grove
George Thornton Bostic	Tex.	Shelby
Edgar Thomas Brame	C. E.	Kenly, R. 3
Max Hiram Braswell	E. E.	Enfield
John Rhodes Brock	M. E.	Richlands, R. 2
William Hand Browne, III	E. E.	Raleigh
Daniel Budisavljevitch	Agr.	Korenica, Serbia
William Taylor Burgin	Tex.	Old Fort
Robert Lee Carpenter	C. E.	Charlotte, R. 11
Marvin Douglas Clark	C. E.	Charlotte, R. 4
Frank Siler Clarke	C. E.	Ansonville, R. 1
Irving Allen Clay, Jr.	M. E.	Clinton
Elmer Randolph Commander	E. E.	Elizabeth City
Bruce Harrison Conner	C. E.	Rich Square
William McCoy Corkill	C. E.	Chester, S. C.
John Bennett Cornwell	Tex.	Chester, S. C.
Andrew Jackson Corpening	Tex.	Worry
Louis Samuel Crisp	Tex.	Falkland
Richard Hallas Crockford	M. E.	Charlotte, R. 5
Charles Howard Culpepper	M. E.	Portsmouth, Va.
William Michael Cummings	E. E.	Reidsville, R. 2
Harry Bernard Curtis	Tex.	Greensboro
Stanley Leon Daughtridge	Agr.	Rocky Mount, R. 6
Clarence Evans Dedmon	M. E.	Shelby, R. 6
Richard Samuel Dill	M. E.	New Bern
Henry Bryan Dixon	Tex.	Mebane
Silas Colin Dougherty	C. E.	Asheville
Dean Franklin Duncan	M. E.	Edwards Crossroads
Maurice Shaw Emmart	Agr.	Winston-Salem
George Grose Farrington	Agr.	Charlotte
Thomas Connor Felton	M. E.	Wilson
John Franklin Ferguson	E. E.	Littleton
James Barr Fink	Agr.	Glass, R. 1
Hoy Lee Fisher	C. E.	Rockwell, R. 2
Alvin Marcus Fountain	E. E.	Catharine Lake, R. 1
Edward Melton Furlough	S. M.	Columbia, R. 1
Albert Sidney Gay	C. E.	Jackson
Claude Gettys	Agr.	Hollis, R. 1
John Henry Gill	C. E.	Henderson, R. 4
Karl Browning Glenn	E. E.	Hendersonville
Edgar Ford Graham	M. E.	Rennert, R. 1
Henry Des'Champs Green	Agr.	Hendersonville

Name	*Course*	*Postoffice*
Joseph Logan Greenlee	C. E.	Old Fort, R. 1
Charlie Witt Gunter	Tex.	Apex, R. 5
Elliott Woodard Harris	S. M.	Seaboard
Joseph Mann Harris	Agr.	Louisburg
Zeb. Marion Harry	E. E.	Gastonia
James Czar Harwell	E. E.	Troutman, R. 1
William Booker Haynes	C. E.	Mount Airy
John Dawkins Henry	E. E.	North Wilkesboro
John William Hodges	Agr.	Jackson, Ga.
Jack Mundy Howard	Agr.	Denver, R. 2
Blair Jenkins, Jr.	E. E.	Lincolnton
William Harney Jennings, Jr.	Chem.	Elizabeth City
Wilburn Carr John	M. E.	Lumber Bridge
James Washington Johnson	Tex.	Weldon
David Loy Jones	Agr.	Alexis, R. 1
Evett Asbury Jones	E. E.	Earl
Everett Thomas Kearns	Agr.	Thomasville
Leroy Monroe Keever	E. E.	Lincolnton
Harvey Nathan Kelly	Agr.	Abbottsburg, R. 1
Robert Bliss Keys	Agr.	Damascus, Va.
James Richard King	Tex.	Statesville
Marion Elmer King	E. E.	Fredericksburg, Va.
Moses Kiser	Agr.	Reepsville
Francis Wilson Kittrell	Chem.	Flat Rock
Raymond Warner Kraft	E. E.	Portsmouth, Va.
Bruce Edward Lancaster	C. E.	Henderson, R. 4
Roy Batterham Lee	S. M.	Asheville
Thomas Alexander Leeper	C. E.	Belmont, R. 1
Charles Shandy Leigh	Tex.	Winston-Salem
Graydon Holmes Lineberry	E. E.	North Wilkesboro
Frank Bennett Looper	E. E.	Granite Falls
Thomas Taylor Lucas	Tex.	Charlotte
Jennings Brooks Mabry	E. E.	Shankle
William Joseph Martin, Jr.	M. E.	Davidson
Duncan Thomas Memory	M. E.	Whiteville
Samuel Willard Mendenhall	Agr.	High Point, R. 2
Wilton Clements Mock	Agr.	Damascus, Va.
Andrew Lee Monroe	E. E.	Monroe
Fred Bethune Monroe	Agr.	Biscoe
Ernest Waldo Moore	E. E.	Rural Hall, R. 2
Miodrag Mrshevitch	Agr.	Usitze, Serbia
Robert Alexander Musgrove	Tex.	Weldon
Samuel Gray Newlin, Jr.	Tex.	Randleman

Name	*Course*	*Postoffice*
Cyril Warren Norman	E. E.	Plymouth
Bonnie Frank Norris, Jr.	M. E.	Gastonia
Harold Ernest Norwood	E. E.	Brevard
Lewis Bear Pakula	E. E.	Raleigh
Cyrus Colon Parker	E. E.	Aulander
Shelton Reed Poole	Agr.	Jackson Springs, R. 1
Ray Maxwell Proffitt	Agr.	Bald Creek
Ernest Andrew Randolph	B. Ad.	Woodstock, Va.
Luther Eugene Raper	Agr.	Welcome, R. 1
Hazel Emmet Rea	Tex.	Matthews, R. 27
George Howard Redfearn	S. M.	Biltmore, R. 1
Marcus Lafayette Reed, Jr.	S. M.	Asheville, R. 2
Conley Jeremiah Rich	Agr.	Asheville, R. 4
Thomas Purdie Richardson, Jr.	E. E.	Lilesville
Joseph Asher Rickards	M. E.	Fayetteville
Wade Hampton Ritchie	Agr.	Concord, R. 4
Rufus Frederick Routh	Agr.	Randleman, R. 2
Herbert London Seagrove	Agr.	Sanford, R. 4
William Franklin Shipman	Tex.	Raleigh
Joe Luther Shuping	E. E.	Morganton, R. 4
Joseph Stanton Skeen	Tex.	Asheboro
Roy Edwin Smith	M. E.	Benson
Tolbert Lacy Stallings	C. E.	Louisburg, R. 4
Julian Byrd Stepp	E. E.	Black Mountain
Daniel Augustus Stevens	M. E.	Martins Point, S. C.
Daniel Elmond Stewart	E. E.	Coats
William Denny Stockton	Tex.	Mocksville, R. 2
Hernay Elton Stout	S. M.	Siler City
Joseph Arnold Stradley	E. E.	Asheville
William Hunter Strong	Agr.	Raleigh
Eugene Frank Strupe	Agr.	Tobaccoville, R .1
Leoleon Douglass Styron	E. E.	Morehead City
Patrick McClellan Sullivan	E. E.	Savannah, Ga.
Timothy Wyatt Suttenfield	Tex.	Leaksville, R. 1
Matthew Lee Tatum	Agr.	Fayetteville
Jesse Powell Tayloe	Agr.	Aulander
Vestal Columbus Taylor	Agr.	Ararat, R. 1
Mason Page Thomas	Tex.	Charlottesville, Va.
Richard Lee Townsend	E. E.	Manquin, Va.
Wiley Ludwig Umberger	Agr.	Concord, R. 3
David Brainerd Vansant	M. E.	Chestertown, Md., R. 3
Robert Edward Vick	Agr.	Seaboard
James Lester Wall	Agr.	Edgar

Name	*Course*	*Postoffice*
Robert Walter Wallace, Jr.	E. E.	Morehead City
James Sloan Ware	Agr.	Kings Mountain, R. 4
William Graham Ware	Tex.	Kings Mountain, R. 4
Charles Henry Warren	Agr.	Lenoir
Harry Swain Webster	S. M.	Weaverville
John Kendle Wells, Jr.	M. E.	Middleburg
Charles Mayfield White, Jr.	C. E.	Manson, R. 1
Thomas Arlington White	Agr.	Aulander, R. 1
John Summie Whitener	C. E.	Hickory
Claude Baxter Williams	Tex.	Lincolnton
Philip Augustus Willis	M. E.	New Bern
Samuel Eugene Wilson	Agr.	Louisburg, R. 5
Thomas Elmore Wray	Tex.	Reidsville
Winfred Denning Yarboro	Agr.	Hope Mills, R. 2

SOPHOMORE CLASS

Henry Stevens Adams	M. E.	Monroe
Robey Washington Adams	C. E.	Four Oaks
Durham Edward Allen	E. E.	Clarkton, R. 1
James Robert Allen	Tex.	Louisburg
Donald Glen Allison	Agr.	Hayesville
John Leslie Andrews	E. E.	High Point
Jesse Oscar Anthony	Agr.	Belew Creek, R. 1
Wm. Henry Hawes Bagwell, Jr.	E. E.	Hamlet
Lloyd Underwood Bailey	E. E.	Manteo
Albert Clarendon Bangs	E. E.	Hendersonville
Carey Hunter Banks	Agr.	Wilson
Bruce Palmer Barber	C. E.	Reidsville
Kenneth Lester Barkley	M. E.	Charlotte, R. 7
Milton Herman Barmettler	M. E.	Raleigh, R. 4
Craighead Lentz Barnhardt	C. E.	Salisbury
Percy Cleveland Beatty	Tex.	Mount Holly, R. 1
William Murphy Bethune	Tex.	Clinton
Gerald Raeden Blount	Agr.	Mackeys
Emmanuel Oscar Breen	Agr.	Rocky Mount
Carl Bridges	Agr.	Shelby
Thomas Wayne Bridges	Agr.	Mooresboro
David Julian Brinkley	M. E.	Plymouth
James Edward Britt	M. E.	Clinton, R. 3
James Milton Brown, Jr.	E. E.	Albemarle
McGreigor Ernul Brown	E. E.	Greenville
Robert Perry Brown	E. E.	Lewiston
Godfrey Hand Browne	Chem.	Raleigh
Lorenzo Newman Browne	E. E.	Ramseur, R. 1

Name	*Course*	*Postoffice*
Wilbert James Carter	Tex.	Wallace
Theodore Roosevelt Causey	E. E.	Greensboro
Julius Joslin Chamberlain	Tex.	Raleigh
Walter Russell Cline	Agr.	Newton, R. 5
John Edward Close	M. E.	Dunmore, Pa.
William Sturges Collins	E. E.	Middleburg
James Bruce Crater	Agr.	Cycle
Herman Frederick Curtis	C. E.	Greensboro
Lucien Jackson Dale	C. E.	Kinston
Joseph Jonathan Davis	C. E.	Stovall
John Samuel Davis	Agr.	Seven Springs, R. 1
Duncan Jennings DeVane	Agr.	Wilmington
Paxton Theodore Dixon	Agr.	New Bern, R. 2
Samuel Davis Dysart	Tex.	Lenoir
Thomas Owen Evans, Jr.	Agr.	Maxton
Charles Douglas Faucette	M. E.	Durham
William Claude Ferguson	C. E.	Vass, R. 1
William Arthur Franklin	Agr.	Linville Falls
Cecil McCally Fry	Agr.	Sunburst
Archie Wilson Green, Jr.	C. E.	Linwood, R. 1
Luke Polycarp Hahn	Agr.	Hickory
Charlie Lowell Hall	Agr.	Round Peak, R. 1
Donald Walton Hamilton	M. E.	Raleigh
Howard Derward Hamrick	E. E.	Ruth
Claude Edward Harris	E. E.	Macon, R. 2
John Leland Higgins	C. E.	Jacksonville
John Robert Hines	Tex.	Black Mountain
Walter Nicholson Hipp	E. E.	Charlotte, R. 6
George Sterling Hobson	E. E.	Greensboro
Robert Thomas Hodges	Tex.	Washington
Robert Clyde Holland	E. E.	Middlesex
Ivan Lacy Holloman	E. E.	New Hill, R. 1
Adolph Jenkins Honeycutt	Agr.	Durham
Walter Harmon Jenkins	E. E.	Goldsboro
Thomas Ruffin Johnson	Tex.	Goldsboro
Benjamin Moseley Jones, Jr.	E. E.	Asheville
Daniel Silas Jones	M. E.	Raeford
James Carl Jones	M. E.	Raleigh, R. 1
Peter Hines Jones	M. E.	Raleigh, R. 1
Andrew Maitland Joyner	Tex.	Woodville
Edward Dickson Kendrick	Agr.	Fallston
Herman Connor Kennett	Agr.	Pleasant Garden, R. 1
Carl Dan Killian	Agr.	Hayesville
Charles Alden Knight	E. E.	Williamston

Name	*Course*	*Postoffice*
Thomas Elliott Lattimore	Tex.	Shelby, R. 5
William Montgomery Lentz	E. E.	Concord
Clarence Windfield Lewis	Agr.	Greensboro, R. 6
Paul Bennett Little	M. E.	Wadesboro
William Rector Loftin	M. E.	Mount Olive
Harry Arthur Lytle	Tex.	Asheville
James Manley McGougan	Agr.	Lumber Bridge, R. 3
James Lawrence McNamara	E. E.	Dunmore, Pa.
Hugh L. Medford	C. E.	Waynesville, R. 2
Francis Bruce Mewborn	Tex.	Grifton
Thomas Franklin Moore	Agr.	Matthews, R. 26
William Lee Meek Morris, Jr.	Agr.	Concord
Winfield Scott Morris	E. E.	Wilmington
John Rea Morrison	Tex.	Charlotte
Eugene Harold Moss	E. E.	Lillington, R. 3
Charles Herbert Neal	Tex.	Reidsville
Robert Shelley Ormand	M. E.	Bessemer City
William Horace Overall	E. E.	Asheville
Lennie Lester Parker	M. E.	Maysville, R. 1
James Marion Pickell	Tex.	Raleigh
William Tallie Price	E. E.	Holly Springs
Hubert Cherry Pritchard	E. E.	Windsor
William Houston Rankin	Agr.	Greensboro
Watson Wharton Rankin	Tex.	Mooresville
Samuel Alexander Redfearn	Agr.	Biltmore, R. 1
Henry Wilbar Rhodes	M. E.	Comfort
Joseph Charles Richert, Jr.	E. E.	Highlands
Cortelyou John Roberts	E. E.	West Asheville
William Jennings Russell	E. E.	Albemarle
John Perry Ryals	Agr.	Benson, R. 2
Joseph Judson Sanders	Agr.	Smithfield, R. 1
Pitts Hilliard Satterwhite	Agr.	Bridgewater
Ralph Henderson Scott	Agr.	Haw River, R. 1
William Edward Shinn	Tex.	Georgeville
Robert Dickson Sloan	Tex.	Wilmington
Joseph Erle Smith	Chem.	Portsmouth, Va.
Walter Ray Smith	C. E.	Farmville
Joel Alexandria Smithwick	Agr.	Manson
Walter Armstead Spicer	M. E.	Stovall
Royal Clementine Stephenson	C. E.	Raleigh
Howard Barber Summerell	Tex.	China Grove, R. 2
John Douglas Sykes	Agr.	Harrellsville, R. 1
Hugh Haynes Tate	Tex.	Old Fort
Henry Francis Taylor	Tex.	Monroe

Name	*Course*	*Postoffice*
Joseph Earl Teague	Chem.	High Point
Dewey Watters Thompson	Agr.	Richlands, R. 1
Loy Frank Thompson	C. E.	Shelby
Clifford Willard Tilson	Agr.	Mars Hill
Samuel Stevens Toler	C. E.	Rocky Mount
Louis Baynes Tomlinson	Agr.	Wilson
Franklin Simmons Trantham	M. E.	Durham
Robert Ward Underwood	C. E.	Durham
Eugene Little Wall	Agr.	Pee Dee, S. C., R. 1
Junius Noble Wall	C. E.	Wendell
Cyrus Leslie Walton	Agr.	Jacksonville, R. 3
William Guy Weaver	Tex.	Rocky Mount, R. 1
William Starling Wells	E. E.	Morehead City
William Love West, Jr.	C. E.	Whiteville
Raymond Spencer Wicker	C. E.	Raleigh
Francis Marion Williams	Tex.	Wilson
Clyde Gordon Willis	E. E.	Morehead City
Millard Thomas Wilson	Tex.	Marion
James Frederick Wooten	E. E.	Chadbourn
Sidney Russell Workman	Tex.	Burlington

FRESHMAN CLASS

Ted Cline Albright	Tex.	Charlotte
Thomas Francis Alcorn	C. E.	Ruffin, R. 3
Clarence Bailey Allen	Agr.	Wake Forest, R. 4
Ethan Allen	E. E.	Biltmore
Edgar William Armstrong	C. E.	Raleigh
Roy Colman Badgett	M. E.	Pilot Mountain, R. 3
Russell Conwell Baggett	E. E.	Lewiston
Carlyle Columbus Bailey	C. E.	Stantonsburg
Donald Milton Bailey	E. E.	Neuse, R. 3
Richard Wainwright Barber	Agr.	Mount Ulla
Patrick Herndon Barnes, Jr.	E. E.	Kenly, R. 3
Laurence William Barrette	Tex.	Fayetteville
Cranford Mims Beasley	E. E.	Louisburg
Belton John Beason	Agr.	Climax
Calvin Brooks Bennett	Tex.	Albemarle
Robert Franklin Berry, Jr.	M. E.	Newport News, Va.
Golden Lee Best	E. E.	Stantonsburg
Lucius Eugene Biddix	E. E.	Marion
Peter Wilson Blum, Jr.	E. E.	Winston-Salem
Ernest Neville Brackett	E. E.	Landrum, S. C.
Henry Matthias Bremer, Jr.	C. E.	Wilmington
Charles Hart Brewer	C. E.	Henderson

Name	*Course*	*Postoffice*
Earley Winfred Bridges	B. Ad.	Raleigh
James Ethelbert Briggs	B. Ad.	Raleigh
Furney Ignacious Brock	B. Ad.	Trenton
Robert Houston Broom, Jr.	Tex.	Hookerton
LeRoy Arglus Brothers	C. E.	Wilmington
Dodd Allison Brown	M. E.	Salisbury
James Robert Brown	Agr.	Democrat
Talmage Thurman Brown	Agr.	Rich Square
James Archie Browne	B. Ad.	Kelford
Joseph Bryan Burden	C. E.	Aulander
Harry Mitchell Burgin	M. E.	Old Fort
Robert Eli Burroughs	E. E.	Bethel
Milton Stanley Burt	Tex.	Holly Springs
Julian Butler	Tex.	St. Pauls
Albert Gaskins Byrum	Agr.	Edenton
Julian Walker Carpenter	Tex.	Monroe
Francis John Carr	E. E.	Asheville
George Edwin Carson	C. E.	Sparta
Willard Burden Cheek	M. E.	Durham
Frank Ferguson Clarke	C. E.	Greensboro
John Charles Clifford, Jr.	E. E.	Dunn
Charlie Gilbert Coble	Tex.	Mount Ulla, R. 1
Roy Olinder Coble	E. E.	Rockingham, R. 1
Elbert Daniel Cody	Agr.	Misenheimer
Evan Louis Colvard	C. E.	Wilbar
Lloyd Henderson Cook	C. E.	Red Springs
Frank Garrett Copeland	E. E.	Rockingham
Louis Avery Corning, Jr.	Chem.	Hamlet
Charles Carson Correll	E. E.	Mebane
Robert Edward Lee Correll, Jr.	B. Ad.	Laurinburg
Bruce Llewellyn Cotten	Tex.	Washington
Albert Barbie Council	E. E.	Mount Airy
Clyde Gibson Council	E. E.	Parkton
Alan Ballard Councill	Tex.	Hickory
William Thomas Cox	C. E.	Goldsboro, R. 4
Andrew Garrald Crawley	Tex.	Raeford
Ernest Frank Culbreath	Tex.	Ninety-Six, S. C.
Edgar Harold Curlee	Tex.	Charlotte
William Cooke Curtis	Tex.	Toledo, Ohio
William Raymond Deal	M. E.	Lenoir
Oscar Elmore Franklin Dellinger	E. E.	Conover
Dean Stearns Derby	Agr.	Norfolk, Va.
Clifton Randolph Dillard	Agr.	Otto
Luther Crenshaw Dillard	Agr.	Spring Hope

Name	*Course*	*Postoffice*
William Richardson Doar	E. E.	Summerville, S. C.
Elison Hayward Dobbins	Tex.	Rutherford
Henry Theodore Duls, Jr.	C. E.	Wilmington
William Legette Dunlap	M. E.	Rock Hill, S. C.
Rufus Eugene Dunn	C. E.	Vineland
Albert Lang Eagles	Agr.	Macclesfield, R. 1
Chelcie Baird Eller	M. E.	Reedy Branch
William Wall Ellerbe	B. Ad.	Rockingham, R. 4
Basil Riggan Ellis	Agr.	Raleigh, R. 2
Laurie H. Ellis	E. E.	Winterville
Woodie Eubanks	Agr.	Lumberton, R. 1
John Sidney Evans	C. E.	Elizabeth City
Joseph Pearce Eves, Jr.	C. E.	Weeksville, R. 1
Joseph Clarence Farmer	Tex.	Bailey
John Thomas Faucett	Tex.	Raleigh
Fred Augustus Fetter, Jr.	Chem.	Raleigh
Walter Curtis Fitzgerald	C. E.	Thomasville, R. 2
John Woods Flinton	Chem.	Cullowhee
Robert Greer Fortune, Jr.	E. E.	Asheville
Frank Emmett Fry	M. E.	Bryson City
Robert Eugene Gambill	Agr.	Independence, Va.
Jacob Shuford Geitner	C. E.	Hickory, R. 4
Prentiss Legarre George	Tex.	Cherryville
William Ewart Gladstone	Agr.	Greensboro, R. 6
Charles Ervin Glenn	Agr.	Black Mountain
Lexman Vinayak Gogate	Tex.	Berkeley
Thomas Martin Goodwin	Chem.	Raleigh
Charles Brightwell Goodyear	Tex.	Greenville, S. C.
John Bennett Gordon	C. E.	Raleigh
Marion Shelor Gravely	Agr.	Monroe
Ralph Thompson Green	C. E.	Oswego
Dewey Pearson Greer	C. E.	Hendersonville, R. 6
Clyde Stimpson Grimes	M. E.	Thomasville
Stacey Howard Hackett	Agr.	Pleasant Garden, R. 1
Calvert Royal Hall	Tex.	Wilmington
Royal Albert Hand	B. Ad.	Belmont
Milton Ray Harden	Tex.	Burlington, R. 9
Frank Leslie Hargrove	E. E.	Enfield
Lucian Haywood Harris, Jr.	Tex.	Salisbury
Thomas Mortimer Harris	Tex.	Mapleville, R. 1
W. Fletcher Harris	E. E.	Elkin
Henry Grady Hawfield	Agr.	Matthews
Frank Cheatham Hayes	E. E.	Norlina
William Campbell Hayes, Jr.	Agr.	Kinston

Name	*Course*	*Postoffice*
Alfred Milton Haynes	B. Ad.	Raleigh
Levi Larmon Hedgepeth	E. E.	Richmond, Va.
Frank Falls Hicks	Tex.	Lawndale
John Jarrel Hill	M. E.	Norwood
Isaac Middleton Hobbs	Tex.	Clinton
Samuel Carter Hodges	E. E.	Sutherlin, Va., R. 2
Clyde Roark Hoey, Jr.	M. E.	Shelby
Robert Clyde Holland	E. E.	Middlesex
George Vernon Holloman	E. E.	Rich Square
Robert Carl Hord	Tex.	Shelby
Herbert Osgood Houk, Jr.	Chem.	Morganton
Oswald McCamie House	Tex.	Charlotte
William Orr Huneycutt	Tex.	Charlotte
Robert Ayden Hunnicutt	Tex.	Raleigh, R. 2
Alton Blaine Hunter	Agr.	Tobaccoville, R. 1
Arnold Spencer Hunter	Agr.	Tobaccoville, R. 1
George Burnap Hurst	E. E.	Jacksonville
John Manning Hutchins	Tex.	Winston-Salem
John Benjamin Jennette, Jr.	C. E.	New Bern
John Ray Jimeson	Agr.	Garden City
George Waverly Johnson	E. E.	South Mills
John Hicks Johnson	C. E.	Raleigh
Lois Lindwood Johnson	Tex.	Hookerton
Lacy Thomas Johnson	M. E.	Thomasville
Rochelle Johnson	Tex.	Chalybeate Springs
Donald Baker Johnston	B. Ad.	Hickory
Thomas Currie Johnston	C. E.	Burlington
Carl Raymond Jones	E. E.	New Bern
George Edward Jones	Agr.	Castle Hayne
Richard Sloan Jones	M. E.	Franklin
Henry Braston Keen	E. E.	Goldsboro
LeRoy Kennette	Tex. and Dye.	Mooresville
Edwin Lowder Key	C. E.	Ellerbe
Leroy Monroe Keever	Agr.	Lincolnton
James Paul Kiser	Agr.	Bessemer City
James Heath Kluttz	Agr.	Albemarle
George William Knox, Jr.	Agr.	Clover, S. C.
David Thomas Lambeth, Jr.	C. E.	Thomasville
Guy Foust Lane	Agr.	Ramseur
Ben Lewis Lang	Agr.	Farmville, R. 1
Isaac Lewis Langley	Tex.	Barnwell, S. C.
George Miller Lasater, Jr.	Tex.	Richmond, Va.
Gaither Calvin Lassiter	B. Ad.	Hillsboro
Larry Carlton Lawrence, Jr.	E. E.	New Bern

Name	*Course*	*Postoffice*
James Wesley Lewis	E. E.	Morehead City
William Andrew Little	B. Ad.	Charlotte, R. 1
Robert Polk Long	Tex.	Charlotte
William Marvin Long	Tex.	Concord
Thaddeus Delaro Love	M. E.	Wilmington
James Robert Luther	Agr.	Raleigh
Floyd Eugene Lutz	Agr.	Newton, R. 4
Julius Paul McAdams, Jr.	Tex.	Salisbury
Eugene Patterson McAskill	Agr.	Jackson Springs
David Haulcomb McCall	E. E.	Swannanoa, R. 1
Malcom David McCallum	E. E.	Carthage, R. 3
Dewey Lee McCulloch	Agr.	Pleasant Garden
William Watson McCulloch	Agr.	Pleasant Garden
Joel Clyde McCurry	C. E.	Shelby
Charles Rufus McDade	M. E.	Lenoir
William Dewey McGee	M. E.	Leicester
Robert Bruce McGoogan	C. E.	Rennert, R. 1
John Earle McGowan	C. E.	New Bern
Charles Nixon McIlwean	Agr.	New Bern, R. 2
John Franklin McNair, Jr.	Tex.	Laurinburg
Gerald Hoover Mahaffee	Tex.	Henrietta
Charles Edward Mann	E. E.	Washington
Shankar Krishna Marathe	Tex.	India
Oscar Ferdinand Mason, Jr.	Tex.	Gastonia
Leonidas Mettellus Matthews	E. E.	Black Mountain
Allen Jay Maxwell, Jr.	C. E.	Raleigh
Romie Lee Melton	E. E.	Cherryville
Jarold Baptiste Melvin	Chem.	Rocky Mount
Allen Mayne Miller	Tex.	Raleigh
Joseph Roger Miller	Agr.	Rocky Point, R. 1
Vinayak Narayan Moghe	Tex.	India
Elmer Odell Moody	E. E.	Biltmore
Ernest George Moore	Agr.	New Bern, R. 5
Halys Guy Moore	Agr.	Shelby, R. 3
John Ellison Moore, Jr.	Agr.	Morven
Needham Branch Moore, Jr.	E. E.	Kinston
Benjamin Garland Morgan	C. E.	Spring Hope
Loury McKee Morgan	Agr.	Candler, R. 1
William Ray Moss	M. E.	Henderson
Howard DeWitt Moye	E. E.	Farmville, R. 1
William Carleton Mull	E. E.	Morganton
John Starr Neely	Tex.	Pinesville, R. 15
Robert Landrum Nichols	E. E.	Earl
Richard Corbett Noble	Agr.	Deep Run, R. 1

Name	*Course*	*Postoffice*
William Lee O'Brien, Jr.	Tex.	Winston-Salem
Wilfred Thomas Outland	Agr.	Woodland
David Russell Palmer	Agr.	Waynesville, R. 3
Clifton Floyd Parrish	Agr.	Climax
Presley Guy Parrish	C. E.	Castalia, R. 1
Henry Blaine Parsons	Agr.	Demopolis, Ala.
Artemus Blue Pate	Agr.	Raynham
William Hayne Patterson	Tex.	Patterson Springs
Samuel Corum Pharr	Tex.	Harrisburg, R. 2
Julius W. Phoenix	E. E.	Greensboro
Rupert Tarplay Pickens, Jr.	C. E.	High Point
Howard Lafayette Pierce	C. E.	Raleigh
Aubrey Eugene Poston	C. E.	High Point
Dewey Potts	Chem.	Warsaw, R. 1
Jack Potts	C. E.	Davidson
Horatio Hugh Powell	Tex.	Martinsville, Va.
Joe John Powell	C. E.	Vanceboro
Thomas Cox Powell	M. E.	Raleigh
William Calvin Powell	Tex.	Whiteville
William Hood Puckett	Agr.	Smithfield
Aaron Borders Quinn	Tex.	Shelby
Claiborne Quinn	B. Ad.	Elizabeth City
Ralph Harrison Raper	M. E.	Welcome, R. 1
Kemp Wilson Reece	C. E.	Mount Airy, R. 3
Charles Howard Revelle	C. E.	Conway, R. 1
George Nicholson Rhodes	Tex.	Charlotte
Robert Burwell Riddick	C. E.	Belhaven
Joe Marvin Ripple	Tex.	Lexington
Daniel Felix Ritchie	M. E.	China Grove
Lawrence Hunter Roane	Tex.	Greensboro
Edwin Early Robbins	Tex.	Raleigh
Forrest Clyde Roberts	Tex.	Kings Mountain
Marvin Yates Roberts	Tex.	Cherryville, R. 1
Judson Lynne Robertson, Jr.	Chem.	Portsmouth, Va.
Henry Grady Rollins	Tex.	Lawndale
Henry Edward Rufty	Tex.	Salisbury
Luther Carlton Salter	Agr.	Morehead City
Jesse Detlaw Sanderson	Tex.	Whiteville
Boydston Satterfield	M. E.	Raleigh
Walter Lawrence Scott	C. E.	Raleigh
Henry Seaman	E. E.	Ridgeway, R. 1
Everett Milton Senter	Tex.	Kipling
James Clarence Senter	Tex.	Kipling
Gustavius Frank Seymour	Agr.	Apex, R. 4

Name	*Course*	*Postoffice*
William Henry Shearin	Agr.	Castle Hayne
Henry Harby Shelor	E. E.	Sumter, S. C.
Charles Floyd Sides	M. E.	Salisbury, R. 8
Arthur Allen Siler	Agr.	Franklin
Austin Taylor Slate	E. E.	Mizpah
Early Caraway Smith	C. E.	Farmington
Garrett Amos Smith	B. Ad.	Morganton, R. 4
John Barry Smith	Tex.	Charlotte
Jeter Lee Smith	M. E.	Morganton, R. 4
Neill McKeithan Smith	Agr.	Vass
Robert Hurdle Smith	Tex.	Charlotte
Marvin Lee Snipes	Agr.	Bynum
Wade Rankin Spratt	Chem.	Mount Holly
William Craik Speed	Chem.	Hendersonville
Carl Eppy Stanley, Jr.	C. E.	Goldsboro
Lemuel Theodore Staton	C. E.	New London
Henry Walter Steele	Tex.	Rockingham
Daniel Kermit Stewart	M. E.	Atkinson
Grady Columbus Stone	C. E.	Winston-Salem
Thomas Damon Sutton	E. E.	Seven Springs
Joseph Ira Thomason, Jr.	C. E.	Greensboro
Lucille Thomson (Miss)	E. E.	Wilmington
Thoralph John Tobiassen	M. E.	Southport
Fredric Wynon Tolar	M. E.	Rennert
Ira J. Tucker	C. E.	Monroe
Dennis Paschal Upchurch	Agr.	New Hill, R. 2
Thomas Benton Upchurch, Jr.	Agr.	Raeford
Robert Wade Utley	E. E.	Moncure
Kenneth Mackenzie Urquhart	Chem.	Norfolk, Va.
Joseph Jeremiah Vereen	C. E.	Little River, S. C.
James Preston Vest	C. E.	Charlotte
Columbus Edwin Vick	C. E.	Nashville, R. 4
Harold Waldroop	C. E.	Franklin, R. 1
Nathan Gan Walker	M. E.	Washington
Samuel Rossiter Wallis	Agr.	Arden, R. 1
James Abner Ward	E. E.	Rose Hill, R. 1
Thomas Marvin Ward	C. E.	Whitakers, R. 5
Charles Aycock Warwick	E. E.	Wilmington
William Sidney Weatherspoon, Jr.	E. E.	Sanford
Peter Ancell Webb	Tex.	Winston-Salem
James Edward Weber	Tex.	Morganton
Walter James Whicker	Agr.	Walkertown, R. 1
Eugene James Whitaker	Agr.	Barnardsville
William Toxey Whitaker	B. Ad.	Raleigh

Name	*Course*	*Postoffice*
Geitner Chamblee White	C. E.	Mebane
Thomas Jackson White, Jr.	B. Ad.	Concord
William Wallace White	Agr.	Manson, R. 1
James Clarence Whitehurst	M. E.	Bethel
Larry Alston Whitford	Agr.	Silverdale
Eugene Desmond Wilder	E. E.	Asheville
John Bright Williams	M. E.	Barnesville, R. 1
John Havard Williams	Tex.	Wilson
Macon Grey Williams	C. E.	Wilson
Norwood Wade Williams	Agr.	McCullers, R. 1
Robert Neely Wingate	E. E.	Charlotte, R. 4
Alonzo Riddick Winslow, Jr.	M. E.	Winfall
Marvin Eason Woodall	C. E.	Smithfield
Archibald McFarland Woodside	Agr.	Statesville, R. 6
Liman J. Worthington	B. Ad.	Winterville, R. 1
George Williamson Wray	E. E.	Sumter, S. C.
Clyde Robert Wright	Agr.	Hunting Creek
John Grayson Yancey	Tex.	Marion, R. 3
John Brown Yarborough, Jr.	C. E.	Louisburg
Chang Ah Young	Tex.	Hawaii
James Carpenter Young	M. E.	Mooresville

SPECIAL STUDENTS

Alonzo Ohio Alford	Journalism	Raleigh
Scott Glennard Harris	B. Ad.	Hendersonville
J. B. Holland	Tex.	————
William Davis Jones, Jr.	Agronomy	Texas
Harlie Abel Miller	Agr.	Lenoir, R. 2
Eli John Morgan	Agr.	Benson
George King Murray	Shop Mgt.	Charlotte
Marshall Leak Parsons	Arch. Dr.	Norwood
Herbert Carlyle Weathers	Shop Mgt.	Raleigh

FIRST-YEAR AGRICULTURE

Joseph Reid Abernathy	Charlotte, R. 9
Henry Arthur Bizzelle	Elizabethtown
Alva Furman Carr	Meggett, S. C.
Claude Cecil Cheatham	Youngsville
Ralph Boyd Cherry	Davidson, R. 2
Joseph Parks Craig	Charlotte, R. 1
Armistead Dowtin	Warrenton
Seth Morgan Fleetwood	Hertford
Gurney Jerome Franklin	Linville Falls

Name	*Postoffice*
John Gilmer Graham	Mount Ulla, R. 1
Alfred Wilson Griffin	Williamston, R. 1
Claude Harris	State Road, R. 2
Henry Haywood	Mount Gilead
James Ira McNeill	Pembroke, R. 1
Augustus Guss Miller	Fingerville, S. C.
William Ludwell Moore	Raleigh
John Bentley Page	Yanceyville, R. 1
Ralph Edison Powers	Northwest, Va., R. 1
Benjamin Wyche Reade	Timberlake, R. 1
Finley Kirkpatrick Rogers	Clarkton, R. 1
W. Frank Sherrill	Cheraw, S. C., R. 1
Kelton Norman Snipes	Marion
Albert Edward Stewart	Henderson, R. 2
Hester Myatt Stott	Wendell
Sceptre Evard Stuckie	Amelia, Va.
James Gaddy Ward	Rowland
Charlie Cox Wilkinson, Jr.	Hillsboro, R. 2
John Daniel Winstead, Jr.	Roxboro, R. 3
Edward Booker Wolfe	Greensboro, R. 7

FIRST-YEAR MECHANIC ARTS

Parks Independence Berryhill	Charlotte, R. 4
William Edwin Bivens	Elkin
Allen Turner Black	Charlotte
Mortimer Alberto Bland, Jr.	Charlotte
Robert Furgerson Coffey	Whitnel
Frank Allen Dewey	Goldsboro
Clarence Vernon Faulkner	Red Oak, R. 3
Clifford Dorman Fentress	Lynnhaven, Va., R. 1
Sol Buck Fishel	Vaughan
Edward Watson Goodwin	Raleigh
Alvin Curtis Gray	Chapel Hill, R. 1
Charles Aycock Hoey	Shelby
Louis Owens Horton	Plymouth
Wayland Giddens Jones	Wilson
William Thomas Kirkman	Pleasant Garden, R. 1
Malcom Carmichael McQueen	Red Springs
Gilbert Morgan Maxwell	Seven
John Wheeler Moore	Williamston, R. 2
Claude Ferman Patterson	Jackson Springs, R. 2
Ralph Rosco	(Lumberton) Italy
Paul Leroy Scott	Wilmington
Stuart Xanthus Stephenson, Jr.	Edenton
Parks Oscar Williams	Charlotte

SECOND-YEAR MECHANIC ARTS

Name	*Postoffice*
Oscar Alexander Falls	Gastonia
Jesse Vann Holloman	Aulander, R. 3
Sidney Otis Lyon	Creedmoor
Frank Allen Pounds	Concord
William Herbert Whisnant	Shelby

FIRST-YEAR TEXTILE

William Lafayette Beery, Jr.	Wilmington
Robert Bruce Cooke	Graham
Robert Harvey Edwards	Red Oak
Henry Kirkwood Ellsworth	Washington
Calmon Adolphus Ennis	Duke
Caspar Wistar Gregory, Jr.	Weldon
Clyde Williams Hall	Stem
Torney Moore Hoke	Hickory
William Charles Lewis	Greensboro
Edison McCaskill	Vass
Raymond Via Mason	Gibson
George Fletcher Siler	Siler City
Ben Lee Umstead	Stem
Clyde Goodwin White	Louisburg
William Kearney Alston Williams	Louisburg
Archie D. Woodworth	Duke
Aaron Jones Yorke	Concord

SECOND-YEAR TEXTILE

John Archie Black	Shelby

SECOND-YEAR AGRICULTURE

William Lubin Baker	Charlotte, R. 2
Willis Wicker Brittain	Horse Shoe, R. 2
John Clyde Brown	Waverly
Thomas Newton Bryson	Cullasaja
John Duncan Bullard	Parkton
Exum Monroe Causey	Greensboro, R. 6
Alonzo James Davis	Mount Olive
Doak Finch	Trinity
William Oliver Gibbs	Marion
Whitfield Dunham Graham	Mount Ulla
James Franklin Harkey	Charlotte, R. 1
Robert Joseph Harris	Rougemont, R. 3
Irvin Monroe Johnson	Lillington, R. 1

Name	*Postoffice*
John Frank McBane	Saxapahaw, R. 1
Reuben Ernest McGoogan	Rennert, R. 1
Lawrence Daniel Rhodes	Castle Hayne, R. 1
Charles Philip Robinson, Jr.	Morven, R. 2
John Leroy Townsend	Lumberton
William Herbert Whisnant	Shelby
John Owen Wilson, Jr.	Mapleville

ONE YEAR AUTO-MECHANICS

Reggie Abbott	Bryson City
Claude Allen	Roxobel
Charles Douglas Culpepper	Wilson
Mark Hayden Davis	Spring Creek
Hubert Solomon Flynt	Rural Hall
Clyde Harrison Gentry	Asheville
Enoch Alexander Harris	Elkin
Giichi Nakamura	Japan
Paul Anderson Summers	Summerfield, R. 2

COURSE IN COTTON CLASSING

Zebulon Vance Blount	Faison
George Columbus Dees	Grantsboro
Albert Magrugor Dickinson	Fremont
Adason Morris McKeithan	Shallotte
Johnnie Alexander Murphy, Jr.	Atkinson, R. 1
Abner Nash	Rosemary
Ruby Lyall Patterson (Miss)	Fayetteville
Herman Dupuy Sears	High Point
Petrus Ferreira van der Watt	Orange Free State, S. Africa
Avery Birton Wilder	Raleigh, R. 2
Jamie Estin Wilder	Raleigh, R. 2
Frederick Williams	Inez, R. 1

WINTER COURSE IN AGRICULTURE

Jesse Hinnant Austin	Garner, R. 1
Foy Clyde Beale	Woodland
Robert Lindo Chilton	Bennett
Jesse Daughtridge	Rocky Mount, R. 6
John William Davis	Raleigh, R. 3
Kimbrough Jones Davis	Saluda
Eugene Talmage Draper	Dunn
Leon Jack Harrell	Goldsboro, R. 3
Woodie Daniel Hewitt	Shallotte

Name	*Postoffice*
Cicero Ulysses Hinshaw	Raleigh
William Bradshaw Jones	Moriah, R. 1
William Nathaniel Henry Jones	Raleigh, R. 1
Lester Lanier Keel	Bethel, R. 1
Neill Malloy McDonald	Duke
Alfred Scarborough	Eastover, S. C.
Arthur Kivett Sharpe	Burlington, R. 4
Clarence Render Sherman	Timberlake, R. 1
William Philo Smart	Union Mills, R. 2
Julius Chester Spicer	North Wilkesboro, R. 1

SPECIAL REHABILITATION STUDENTS

Name	*Course*	*Postoffice*
Benjamin Blaine Absher	Auto	Austin, R. 1
Frank Morton Adams	Mech. Dr.	Raleigh
Roscoe Addison	Mech. Dr.	Durham, R. 6
George Rufus Adkins	Machinist	Roanoke Rapids
Eula Hudson Aiken	Agr.	Rich Mountain
William Daniel Alford	Prac. Elec.	Raleigh
Barna Titus Allen	Agr.	Troy
Irving Lewis Allen	Agr.	Eleazer
Arthur Jackson Andrews	Agr.	Dulah
Sol Angle	Agr.	Milton
George Elam Arney	Agr.	Lenoir
Henry Lee Austin	Agr.	Unionville
Lewis Slocumb Autry	Agr.	Autryville
Walter Carl Averitt	Agr.	Stedman
Fred Gifford Baber	Prac. Elec.	Forest City
Mahlon Stanley Baggett	Agr.	Buckhorn, Va.
Coy Eaton Bailey	Agr.	Raleigh
Henry Wise Baker	Tex.	Durham
Charles Rhoades Barcklaey	Agr.	Rosemary
Elijah V. Barefoot	Agr.	Duke
John Harvey Barfield	Prac. Elec.	Fremont
William Hubart Barker	Agr.	Davidson, R. 2
Carl Clayton Barnes	Agr.	Roxboro
Joseph Blackman Bass	Carpentry	Goldsboro
Patrick H. Bass	Agr.	Castalia, R. 2
Charles Henry Baugh, Jr.	Hort. (Agr.)	Raleigh
Edgar Beam	Agr.	Ellenboro, R. 2
Lawrence Otho Beasley	Agr.	Wilson, R. 6
Bracknel Arthur Benfield	Agr.	Crossnore
John Wesley Bentley	Agr.	Mooresville
Roby C. Best	Agr.	Goldsboro, R. 2

Name	*Course*	*Postoffice*
Baxter Birchfield	Agr.	Tapoco
Arthur Joseph Bonnette	Mech. Dr.	Philadelphia, Pa.
John Elisha Boone	Agr.	Pittsboro
Lee Andrew Bowen	Auto Mech.	Henderson, R. 1
Thomas Roy Boyett	Prac. Elec.	Lucama, R. 13
William Everett Bracey	Agr.	Roxobel
Thomas Branch	Agr.	Kernersville, R. 4
Lorenzo Bruner Braswell	Agr.	Monroe, R. 2
William Garrett Bray	Agr.	Riddle
Walter Moody Bray	Auto	Rockingham
Abner Tilton Brickell	Agr.	Bath
Charles Samuel Brooks	Auto	Bina
Herbert Mitchell Brown	Agr.	Greensboro
Jamie Edward Brown	Drafting	Rosemary
Lorne Brown	Agr.	Old Fort
Reuben Sanders Brown	Agr.	Brinkleyville
James Arthur Bruce	Agr.	Randleman, R. 1
George Wesley Buchanan	Agr.	Hayesville, R. 4
Thomas C. Butler	Tex.	Burlington, R. 7
Harvey Perry Campbell	Prac. Elec.	High Point, R. 4
Rencher Lardon Campbell	Agr.	Pittsboro, R. 2
Hoyle Benjamin Carpenter	Agr.	Forest City, R. 3
Clinton Brackett Carter	Agr.	Reidsville, R. 2
Henry Lou Carter	Prac. Elec.	Ingold
James Lee Cathey	Prac. Elec.	Mooresville
Jesse Birt Champion	Mech. Dr.	Hendersonville, R 6
John Ruffin Chandler	Agr.	Vanceboro, R. 1
Benjamin Oliver Chatham	Agr.	Fairview, R. 1
Michael Burriss Chinnis	Agr.	Phœnix, R. 1
Claud Donald Church	Agr.	Brownwood
Horace Clark	Agr.	Rocky Mount
James Luther Clark	Farm Mech.	Evans
Ralph Leonard Clark	Agr.	Swannanoa, R. 1
Urie Thomas Clark	Machinist	Pittsboro
John Hoyte Cline	Agr.	Lawndale
James Randall Coggin	Agr.	Eldorado
James Grady Collum	Agr.	Councils, R. 2
John Conner	P. Plt. Opr.	Fairview
Lacey Martin Crowell	Agr.	Mount Gilead, R. 3
Preston Alexander Daniels	Agr.	Columbia, S. C.
Thomas Daniels	Agr.	Culberson, R. 1
Nathan Julian Darden	Agr.	Stantonsburg
Percy Thomas Dark	Agr.	Siler City, R. 5
Burwell McClellan Davis	Mech. Draft.	Mount Ulla

Name	*Course*	*Postoffice*
Henry Alford Davis	Agr.	Almond
William Lee Davis	Agr.	Raleigh
Emanuel David Dickerson	Auto	Durham
Cox Douglass	Agr.	Pine Creek
Horace Dowd	Agr.	Carbonton
Andrew Osbon Eaker	Tex.	Shelby
Marion Gaston Eaker	Agr.	High Point
Lemmie Easter	Tex.	Amelia C. H., Va.
Riley Jerome Easter	Tex.	Lexington
Alex. Will Edwards	Machinist	Raleigh
Charlie Elliott	Agr.	Rocky Mount, R. 5
Jerry Parker Elmore	Auto Mech.	Goldsboro, R. 5
Claude Myers Erwin	Agr.	Henrietta
Benjamin Franklin Etheridge	Agr.	Vanceboro
Chris Henry Eveland	Mech.	Rocky Mount
William Marslender Evett	Agr.	Blounts Creek, R. 1
Emmett Faircloth	Agr.	Stedman, R. 1
Fred Guy Fleming	Agr.	Creedmoor
Ben Lewis Flowers	Prac. Elec.	Fremont
Frank James Flynn	Agr.	Uree
Ransom David Fowler	Agr.	Mount Tabor
Foy Guy Fox	Agr.	Gastonia, R. 4
Arthur Edward Fullam	Dairy	Biltmore, R. 2
Otis Lee Fulmer	Agr.	Rome, Ga.
Raymond L. Garner	Agr.	Newport
Alexander Gates	Agr.	Timberlake, R. 2
Charlie Irvin Gibson	Tex.	Henderson
Charles Duncan Gilchrist	Agr.	Cameron, R. 2
Turner Martin Goff	Farm Mech.	Rocky Mount, R. 5
Edward Monroe Goodman	Armature Winding	Salisbury
Patrick Winslow Goodson	Agr.	Denver
Julius Decatur Green	Agr.	Burnsville
Mark Gupton	Agr. Poul.	Raleigh
Burette Cleveland Gwaltney	Prac. Elec.	Morganton
William Franklin Hackney	Agr.	Scotland Neck, R. 2
Ray Hamiltin	Auto	Sea Level
Lawrence Boone Harding	Arm. Winding	Winston-Salem
Addie Walter Harris	Tex.	Henderson
Claude Harris	Agr.	State Road, R. 2
Daniel Bunn Harris	Agr.	Cedar Creek
Lola A. Harris	Agr.	Stony Point, R. 2
Roe Lindsay Harris	Agr.	Fairfield
Clyde Everett Hawkins	Agr.	West Asheville
Robert Grady Hayes	Tex.	Marietta

Name	*Course*	*Postoffice*
Arthur Washington Heatherly	Agr.	Canton, R. 1
Thomas Barnett Heddon	Agr.	Highlands
Edward Helms	Agr.	Monroe
Houston Henderson	Agr.	Jennings
James Edgar Hicks	Agr.	Marion
Charles Wesley Hill	Agr.	Indian Trail
Joseph Franklin Hill	Agr.	Beaufort, R. 1
Rodden Wright Hill	Poul.	Garner
William Russell Hill	Agr.	Swannanoa
Henry Clay Hobbs	Tex.	West Durham
Haywood Witt Holt	Agr.	Raleigh, R. 3
William McPhail Holt	Farm M.	Sanford, R. 1
Alvice Jay Holland	Agr.	Canton, R. 1
Troy Bascom Honeycutt	Tex.	Oakboro, R. 1
Edward Paul Hudson	Machinist	Columbus, Ga.
Fred McKinley Hyatt	Agr.	Weaverville
Charles Austin Hylton	Agr.	Spero
Frank Ivey	Auto	Clinton
Willie Joines	Agr.	Amelia
Charley Corbitt Jolly	Agr.	Henrietta
Andrew Jones, Jr.	Agr.	Catharine Lake, R. 1
Elvin Jones	Machinist	Grifton, R. 4
Ralph James Jones	Agr.	Warsaw
Tillman Washington Jones	Auto	Franklin
Herman Edgar Kennedy	Pr. Elec.	Sanford
Fonnie Keel	Machinist	Greenville
Edward Clarence King	Agr.	Topsail
Keith Dargan King	P. Plt. Opr.	Cheraw, S. C.
Wade Monroe King	Agr.	Greensboro
Arthur Eagles Knowles	Agr.	State College Station
James Henry Lambert	Auto	Henderson
Rupert Bernard Lee	Agr.	Four Oaks, R. 1
Bennie Edgar Lewis	Agr.	Zebulon
Charles Lemuel Lewis	Agr.	Bostic
Garland Lloyd	Auto	Maysville
Thomas Murray Lloyd	Pr. Elec.	Durham
Ernest Wilson Love	Pr. Elec.	Concord
Donovan Bernard Lumsden	Heat. and Vent.	Raleigh
Ben. Harrison Lyon	Agr.	Abner
Reed McClintock Lyons	Pr. Elec.	Raleigh
Odie McCullen	Poul.	Newton Grove, R. 1
Lester Farrow McGee	Agr.	Angier, R. 1
Harvey Ernest McLaurin	Agr.	Fayetteville
Neil Thomas McLeod	Poul.	Dunn

Name	*Course*	*Postoffice*
Ralph Lansing Mallory	Mech. Dr.	Raleigh
Frank Donald Marcom	Pr. Elec.	Morrisville, R. 2
Jesse Ballard Martin	Agr.	Graham
Fletcher Andrew Mason	Agr.	Black Mountain, R. 1
Lorenzo Dowell Massey	Agr.	Mount Olive, R. 7
Murphy Neill Matthews	Tex.	Lillington
Silas Tilman Maynard	Pr. Elec.	Lumber Bridge, R. 2
Ernest Alfred Melin	Agr.	Stamford, Conn.
David Bracker Melton	Agr.	Monroe, R. 4
Charles Stephen Miller	Agr.	Rougemont, R. 5
Elis Fleet Millsaps	Agr.	Hiddenite, R. 1
Thomas Otto Minton	Agr.	Minton
Horace Montgomery	Agr.	Mineral Springs, R. 1
John Wheeler Moore	Agr.	Williamston, R. 2
Robert Andrew Moore	Pr. Elec.	Wilson
William Allen Morton	Agr.	Maysville, R. 2
Jesse Monroe Moss	Arch. Dr.	West Asheville
Ransom David Mull	Agr.	Morganton
Earnie Murphy	Poul. & Hogs	Newton Grove, R. 2
John James Nance	Dairy	Richardson, R. 1
Ernest Nelson	Mach. Shop Pr.	Atlanta, Ga.
Noah Oakes	Machinist	Charlotte
Clarence Page	Agr.	Barnesville, R. 1
Norman Park	Agr.	Candor
Irving Parsons	Agr.	Candor, R. 1
Jennings Bryan Payne	Pr. Elec.	Canton
Walter Herbert Peake	Agr.	Green Mountain
George Willis Peele	P. Plt. Opr.	Goldsboro, R. 5
Herbert Pender	P. Plt. Opr.	Selma
Cecil Perry	Mech.	Raleigh
Sidney Weldon Perry	Mech. Dr.	Raleigh
William Tines Pitchford	Auto	Littleton, R. 5
Walter Roderic Porter	Mech. Dr.	Rocky Mount
James William Potter	Agr.	LaGrange, R. 1
Dennie F. Pressley	Agr.	Gastonia
James Houston Pressley	Pr. Elec.	Monroe, R. 1
Thamar Espron Propst	Agr.	Morganton, R. 4
Joshua Pulliam	Agr.	Roxboro
Floyd McAfee Putnam	Agr.	Shelby
Gilbert Holton Quick	Tex.	Laurinburg
Frank Ryle Quinn	Agr.	West Asheville
Emory Lee Ray	Agr.	State Road, R. 1
Ed. Cleveland Rayle	Agr.	Greensboro
Gurna Anthony Richardson	Agr.	Randleman, R. 2

Name	*Course*	*Postoffice*
James Arthur Riddle	Agr.	Cary
Howard Robertson	Agr.	Wendell, R. 2
Thomas Elson Robertson	Mech.	Zebulon, R. 3
James Samuel Rogers	Agr.	Monroe
James Walter Rollins	Agr.	Randleman, R. 2
Edgar Manton Satterthwaite	Agr.	Ransomville, R. 1
Burton Thomas Sauls	Agr.	McCullers
Graham Lane Savage	Agr.	Clarkton, R. 3
Moses Leonard Sheppard	Agr.	Washington, R. 4
Reid Banks Simpson	Agr.	Jonesboro, R. 3
Thomas Baxter Simpson	Agr.	Waxhaw, R. 2
Joseph Beecher Smart	Agr.	Union Mills, R. 3
William Mullington Smith	Agr.	Whiteville, R. 1
Sam Smithwick	Mach. Shop Pr.	Kinston
Kelton Norman Snipes (Mrs.)	Agr.	Marion
Edward Franklin Snody	Agr.	Mt. Airy
Garland Spain	Agr.	Rocky Mount
Walter Bassom Sprinkle	P. Plt. Opr.	Murphy, R. 1
Jestie W. Stallings	Agr.	Gilkey
Howard S. Steelman	Pr. Elec.	Brownwood
John William Stephenson	Agr.	Willow Springs
Isaac Henry Stiwinter	Agr.	Scroll
Jacob Dawson Stokes	Agr.	Wallace
Rodolphus Strider	Agr.	Pisgah
Carlos Carlyle Stroup	Tex.	Lowell, R. 1
Daniel King Suggs	Agr.	Dothan
Samuel Elmore Sykes	Auto	Spring Hope, R. 2
Robert Haile Taylor	Agr.	Idlewild
Gilbert C. Thomas	Pr. Elec.	Asheville
Cecil Grey Thornton	Agr.	Elizabeth City
Troy Treadway	Agr.	Beaver Creek
Sir Walter Raleigh Triplett	Auto	Purlear, R. 1
Augustus Turner	Agr.	Marion
Moses Harrison Ussery	Machinist	Norman
John Craford Wadkins	Agr.	Entwistle
Harvey Walker	Agr.	Olin
Ulysses Grant Walker	Pr. Elec.	Auburn
Oswald Herbert Ward	Pr. Elec.	Wallace
Seymore Ward	Agr.	Vineland
Lee Columbus Warren	Agr.	Conetoe
Ernest Tillman Waters	Agr.	Wilmington
Ernest Edward Watkins	Agr.	Macon
Harvey Martin Watson	Agr.	Yuma
Ballon Mabry Watts	Agr.	Nakina

Name	*Course*	*Postoffice*
Banks White	Arch. Dr.	Gastonia
Chester Beauregarde White	Agr.	Gliden
Thomas Lee Whitley	Poul.	Oakboro
Gilbert C. Whitmire	Tex.	Quebec
Wiley Williams	Agr.	Raleigh
Wiley Hinton Williams	Agr.	Washington
Bird Wilson	Agr.	Mathews, R. 19
Fred Wilson	Pr. Elec.	Statesville, R. 5
Finley Coffey Woods	Pr. Elec.	Kings Mountain
Milton Augustus Worthington	Pr. Elec.	Grifton
Vann D. Wright	Pr. Elec.	Troy

SUMMARY

By Classes

Graduates	58
Seniors	141
Juniors	156
Sophomores	136
Freshmen	307
Short Courses:	
First Year Agriculture	29
Second Year Agriculture	20
One Year Auto	9
First Year Mechanic Arts	23
Second Year Mechanic Arts	5
First Year Textile	17
Second Year Textile	1
Specials	8
Special Rehabilitation	262
Winter Course in Agriculture	19
Winter Course in Cotton Grading	12
Total	1203

By Courses

Agriculture, including short courses	301
Business Administration	18
Chemistry	26
Civil Engineering	130
Electrical Engineering	144
Journalism (Grad.)	2
Mechanical Engineering, including short courses	133
Physics (Grad.)	2
Shop Management	9
Special Rehabilitation	262
Textile, including short courses	176
Total	1203

Summer School 879

STATE COLLEGE SUMMER SESSION, 1921

COLLEGE CREDIT

Name	*Postoffice*
Mary Elizabeth Alford	Raleigh
Howard Gould Baker	Raleigh
Clara Wooten Barrett	Raleigh
Dixon Barrett	Raleigh
Bracknel Arthur Benfield (Rehab.)	Crossnore
Early Winfred Bridges (Rehab.)	Raleigh
Martha Brooks	Raleigh
John Duncan Bullard (Rehab.)	Parkton
Everett Burgess	Norfolk, Va.
Margaret Dale Calvert	Raleigh
Julian Walker Carpenter	Monroe
Edward Lamar Cloyd	Raleigh
Susan Dewar	Raleigh
Wilma Durham	Lumberton
Woodie Eubanks (Rehab.)	Lumberton
William Claude Ferguson (Rehab.)	Vass, R. 1
Hoy Lee Fisher (Rehab.)	Rockwell
Charles Witt Gunter (Rehab.)	Raleigh
Irene Gupton	Wood
John Leland Higgins	Jacksonville
Randolph Isabel Hill	Raleigh
Charles Newton Hulvey	Raleigh
Lucile Inscoe	Castalia
Erwin Monroe Johnson (Rehab.)	Lillington
Isaac Lewis Langley (Rehab.)	Barnwell, S. C.
Thomas Smith Lee	Charlotte
John Henry LeRoy, Jr.	Elizabeth City
Donovan Bernard Lumsden (Rehab.)	Raleigh
Gertrude Mattison	Raleigh
Helen Murchison	Raleigh
Miss Willie Pleasants	Virgilina, Va.
Eva Llewellyn Poole	Quincy, Fla.
Alma Scull	Arcola
Royal Clementine Stephenson	Raleigh
Claudilene Sykes	Castalia
Irene Christine Taylor	Louisburg
Louise Ruth Taylor	Louisburg
Everarde Adele Wilson	Louisburg
Annie Lee Yates	Cary
James Young	Mooresville

TEACHERS VOCATIONAL AGRICULTURE

Name	*Postoffice*
Norman Alexander	Liberty
Walter Dorsey Barbee	Seaboard
Jere Wilson Bason	Swepsonville
Thomas Wayne Bridges (Rehab.)	Mooresboro
George Cleveland Buck	Castalia
Harley Wilson Bullard	Orrum
Samuel Lee Carpenter	China Grove
Harper Nicholson Cherry	Vanceboro
Williamson Lee Cooper, Jr.	Graham
Arthur Foster Corbin	Tryon
Thomas Philmore Dellinger	Crossnore
Alvah Dunham	Raleigh
Francis Marion Dwight	Vass
Fred Graham Elliott	West Durham, R. 1
Thomas Benjamin Elliott	Shelby
Randal Bennett Etheridge	Manteo
Perry Hamilton Gaston	Candler
Julian Austin Glazener (Rehab.)	Raleigh
Russell Peyton Harris	Chapel Hill
Fred Bryan Harton	Flat Rock
Jesse Meacham Henley	Jamestown
Leroy Copeland Herring	Marion, S. C.
John Stewart Howard	Salemburg
Robert Henry Hutchison	Snow Camp
Eugene Carl Jernigan	Benson
Robert Morris Kimsey	New Orleans, La.
Daniel Emmet Koontz	Cooleemee
Robert Hamilton Lankford	Harmony
Joel Brevard Lawrence	Statesville
George Oliver McBroom	Lillington
Wilson Copes McCoy	Portsmouth, Va.
Howard Hoffman McKeown	Roxboro
Peyton Howard Massey	Zebulon
Edward Newton Meekins	Cary
Joseph Edgar Michael	Harmony
John Daniel Miller	Fairview
Eli John Morgan	Benson
Paul Harris Nance	Bonlee
Francis Alexander Penland	Barnardsville
Charles Anthony Sheffield	Linwood
Dennis Howard Sutton	Bladenboro
Jew Irvin Wagoner	Durham, R. 3
Clarence Westbrook Warrick	Goldsboro

Name	*Postoffice*
Earl Parks Welch	Charlotte, R. 7
Nathaniel Warren Weldon	Stovall
Robert Cleveland Young	Swannanoa
Alpheus Folger Zachary	Bahama

TEACHERS, ACCREDITED, STATE SCHOOL

Rebecca Abernethy	Charlotte, R. 6
Jordan Royal Adams	Rutherfordton
Mrs. Inez Alexander	Southport
Ora Alford	Zebulon
Bertha Dora Allen	Cary
Claud May Altman	Dunn
Mamie Arnold	Cameron
Mrs. Minnie Atkins	Thomasville
Zula Mae Austin	Clayton
Nellie Bain	Dunn
Margaret Ballance	Lake Landing
Kate Averitte Ballard	Franklinton
Thomas Hilliard Barbee	Morrisville
Carrie Inez Barnes	Gumberry
Mrs. Agnes Barnhardt	Cerro Gordo
Vida Bass	Clinton
Pattie Viola Battle	Pee Dee
Swannanoa Mary Baucom	Raleigh, R. 2
Evelyn Bazemore	Wilmington
Bertha Beasley	Edenton
Lillian Caroline Beasley	Louisburg
Mattie Beasley	Edenton
Alice Bell	Troy
Reba Mae Bell	Pikeville
Sadie Benette	Warsaw
Sallie Howard Benson	Nashville
Fannie Bishop	Bath
Florence Blanchard	Trotville
Daisy Bland	Sanford
Rose Bland	Sanford
Mrs. Samuel Perry Boddie	Louisburg
Nell Bolinger	Lincolnton
Florine Boone	Mapleville
Addie Elizabeth Bordeaux	East Durham
William Colon Bowden	Rex
Mrs. William Colon Bowden	Rex
Amelia Boyette	Raleigh
Velma Brady	Benson

Name	*Postoffice*
Gladys Brantley	Spring Hope
Lula B. Brantley	Spring Hope
Mrs. Pearle Stallings Brewer	Alert, R. 1
Mary Sue Bridges	Wakefield
Urma Willis Britt	Enfield
Mary Lucile Britton	Seaboard
Harriet Brookfield Brown	Vanceboro
Maggie Brown	Rich Square
Minnie Brown	Raleigh
Thelma Brown	Kinston
Pretto Browne	Elon College
Mrs. William Hand Browne	Raleigh
Mary Kathryn Bryan	Carthage
Nora Alma Bryant	Pilot Mountain
Ethel Mae Buffaloe	Raleigh, R. 3
Winnie Davis Burt	Enfield
Reba Gertrude Butts	Morrisville
Elva Byrd	Bunlevel
Virginia Elise Caddell	Elon College
Bessie Jane Cameron	Sanford
Ida Orlean Campbell	Raleigh, R. 4
Louise Campbell	Carthage
Mattie Cothern Campbell	Raleigh, R. 4
Helen Marie Canfield	Morehead City
Eloise Butler Cannady	Oxford
Laura Holleman Carroll	Henderson
Leyta Roberta Carter	Nashville
Wirta Louise Cash	Oxford
William Branson Caviness	Cary
H. R. Chamblee	Wakefield
Mrs. Letha B. Chappell	Raleigh
Clara Clapp	Siler City
Miss Jimmie Clark	Inez
Mary Gladys Coats	Clayton
Seth Allen Coats	Dunn, R. 5
Minnie Elizabeth Coble	Burlington, R. 1
Bernice Alma Coleman	Barley
Merie Colson	Wadesboro
Emma Dowell Conn	Raleigh
Sallie Conner	Rich Square
Vivian Conner	Rich Square
Mary Connor	Dover
Ernest William Constable	Lake Landing
Mrs. Kiva Cheves Cook (Mrs. M. L.)	Wakefield

Name	*Postoffice*
Carrie Cockrell Cornwell	Raleigh
Betty Council	Apex
Enid Council	Apex
Nina Holland Covington (Mrs. L. E.)	Raleigh
Myrtle Lee Crews	Oxford
Lillie Florence Critcher	Zebulon, R. 3
Mary Long Daniel	Airlie
Mrs. Della Poole Daughtry	Clayton
Christine Trotter Davis	Henderson
Lillie Davis	Mamers
Lossie Davis	Lucama
Onie Virginia Davis	Lucama
Louise Burt Dean	Louisburg
Retha Deans	Pikeville
Mrs. Benjamin Franklin DeLoatch	Gibsonville
Benjamin Franklin DeLoatch	Gibsonville
Luther Allen Denning	Bentonville
Mattie DeShazo	Spencer, Va.
Bessie Gray Dixon	Elm City
Myrtle Lou Dixon	Rose Hill
Mary Julia Dozier	Fountain
Joseph Lon Duncan	Clayton
Emma Dunn	Wise
John Edmond Dupree	Angier
Theodolinda Euzelia Early	Nazareth
Ethral Eborn	Pinetown, R. 2
Allie Edwards	Lemon Springs
Mary Elizabeth Elmore	Goldsboro
Mrs. Jessie Eutoria Estes	Wake Forest
Ruth Faulkner	Kinston
Kate Ferguson	Neuse
Gertrude Ferrell	Bailey
Lenna Fleetwood	Edenton
William Ezra Fleming	Fuquay Springs
Alice Henry Flowers	Goldsboro
Alma Floyd	Fairmont
Roberta Floyd	Fairmont
Sarah Floyd	Fairmont
Lucile Fordham	Kinston
May Belle Franklin	Raleigh, R. 4
Zora Lee Frye	Carthage
Lucile Futrell	Conway
Kate Mae Gainey	Clinton
Mattie Lee Gainey	Clinton, R. 6

Name	*Postoffice*
Janie Garrett	Warsaw
Berta Gay	Spring Hope
Mrs. Julian Austin Glazener	Raleigh
Howard Gibson Godwin	Dunn
Emma Goodman	Mount Ulla
Bernice Goodwin	Apex
Mrs. Ovid T. Goodwin	Raleigh
Belle Graham	Raeford
Mrs. Effie Iseley Green (Mrs. Albert Carl)	Raleigh, R. 5
Betty Greene	Wadeville
Minnie Greene	Oxford, R. 5
Lillie Gresham	Beulaville
Bess Grier	Charlotte, R. 11
Ethel Idell Griffin	Williamston
Ezra Daniel Griffin	Dunn
Hugh Cleveland Griffin	Woodland
Lovie Griffin	Selma
Nettie Hilda Gschwind	Vass
Clara Hall	Charlotte, R. 3
Maggie Hardee	Benson
Bessie Mae Harrell	Aulander
Eva Harris	Roxboro
Annie Lorena Harrison	Pantego
Ursula Harrison	Littleton
Sarah Henderson	Rowland
Fannie Evans Hill	Cofield
Josephine Elizabeth Hill	Rocky Mount
Mrs. Herbert Hamilton Hobgood	Mapleville
Genevieve Holleman	Currituck
Elizabeth Fennelly Holman	Raleigh
Bonnie Belle Horton	Buie's Creek
Ila Ethel House	Cary
Blanche Sadie Huff	Henderson, R. 4
William Wade Hussey	Asheboro
Estelle Isles	Thelma
Bertha Ellen Isley	Burlington, R. 7
Ernest Boston Isley	Gibsonville, R. 1
Annie Bell Jackson	Wake Forest, R. 5
Janie Jackson	Red Springs
Loulia Elizabeth Jarman	Louisburg
Frederika Pearl Jenkins	Raleigh
Winnie Jennings	Olin
Albert Ransom Johnson	Hendersonville, R. 5
Ethel Johnson	Clayton, R. 3

Name	*Postoffice*
Lillian Johnson	Rich Square
Lillie May Johnson	Farmer
Mamie Estelle Johnson	Goldsboro
Eva Harding Jones	McCullers, R. F. D.
Gussie Jones	Laurinburg
Julia Jones	Wilmington
Lena Rivers Jones	Zebulon
Alla May Jordan	McCullers
Lillian Jourdan	Merry Oaks
Mrs. Annie Weddie Killian	Raleigh
Arline Kimball	Townsville
Elizabeth Annie King	Mount Olive, R. 3
Nannie Shields Lamb	Scotland Neck
Vivian Lampley	Rockingham
Mrs. Nilla Lancaster	Goldsboro
Mrs. Frank Woodard Lawrence	Raleigh
Mrs. Janie Russell Leach	Star
Edith May Lee	Greenville
Esther Ellen Lee	Dunn, R. 1
Florence Lillie Lefler	Albemarle
Frank Josephine Leighton (Mrs. A. F.)	Scotland Neck
Odessa Lemmond	Indian Trail
Bettie Lewis	Faison
Ola Sudie Long	Morehead City
Elizabeth Whitmell Lucas	Enfield
Vera Lunsford	Roxboro
Aileen Luther	New Hill
Leon Luther	New Hill
Brandon McCorkle	Alexis
Louise McCorkle	Alexis
Elizabeth McDonald	St. Pauls
Margaret Ellen McGeachy	St. Pauls
Annie McGee	Charlotte
Mrs. Howard Hoffman McKeown	Roxboro
Charlotte Lillian McKoy	Old Fort
Elizabeth McLauchlin	Carthage
Martha McLeod	Buie
Vera McLeod	Broadway, R. 1
Marie MacMillan	Parkton
Onetah Johnson McMillan	Wagram
Annie Jane McNeill	Broadway
Lillie Mae Mabry	Norwood
Sallie Lou Macon	Louisburg
Elizabeth Pearl Maness	Biscoe

Name	*Postoffice*
Lula Maness	Biscoe
Minerva Lois Mangum	Cardenas
Gaither Clayton Mann	Fuquay Springs
Ruby Adele Mann	Manns Harbor
Mrs. Grace Hale Markham	Raleigh
Reuben Dwight Marsh	Marshville
Hallie Marston	Henderson
Joseph Warren Massengill	Four Oaks
Effie Rouse Meekins (Mrs. E. N.)	Cary
Martha Elizabeth Mercer	Fountain
Gertrude Michael	Kernersville
Pearle Michael	Kernersville
Annie Ivey Miller	Raleigh
Luther Sigsbee Miller	Avon
Etta Mitchell	Goldsboro, R. 4
Mary Effie Mitchell	Raleigh
Ivy Modlin	Aulander
Kate Monroe	Tar Heel
Dora Moore	Liberty
Estelle O'Berry Moore	Atkinson
Bessie Agnes Morgan	Caraway
Effie May Morgan	Raleigh, R. 3
Naomi Morgan	Dunn, R. 2
Minnie Morrison	Lillington
Estelle Moss	Oxford, R. 2
Beulah Murray	Rock Creek
Laura Aileen Murray	Dennisto
Sallie Delitha Naylor	Dun
Bertha Neal	Ale
Helen Hughes Neal	Beaufo
Mattie Belle Newton	Dun
Carolina Lockhart Nicholls	Windso
Verdie Noble	Deep Run, R. F. I
Verna Noble	Deep Ru
Lucile Meredith Norris	Wakefiel
Ava Eleanor Olive	Mount Air
Beulah Amelia O'Quinn	Mame
Ruth Owen	Clarkvill
Mary Anderson Page	Raleig
Carrie Elizabeth Pappendick	Elizabeth Cit
Eula Bell Pappendick	Elizabeth Cit
Annie Pearle Parker	Youngsvil
Margaret Parker	Mount Oliv
Vernon Parker	Macclesfie

Name	*Postoffice*
Linnie Parks	Barium Springs
Willie Paul	Elkin
Zelma Maye Paxton	Charlotte
Alice Fountain Peacock (Mrs. A. L.)	Raleigh, R. 1
Caddie Peele	Williamston
Myrtle Peele	Williamston
Nora Pegues	McFarlan, R. 1
Mrs. Eunice Wellons Penny	Garner
Estelle Perry	Macon
Mariana Mann Phillips (Mrs. W. C.)	Raleigh
Emma Virginia Pittman	Whitakers
Mamie Ella Pittman	Whitakers
William Clarence Poe	Ramseur
Eula Pollock	Mount Olive, R. 5
Annie Lee Powell	Whiteville
Lucile Powell	Whiteville
Bert Price	Ellenboro
Mary Ethel Price	Charlotte
Christine Mock Pridgen	Warsaw
Alma Hicks Ragland	Oxford, R. 1
Georgiana Ray	Wakefield
Ethel Reece	Boonville
Mary Stuart Riddick	Spring Hill
Cora Lee Ritchie	Kannapolis
Felicite Rivet	Staunton, Va.
Lovie Gladys Robertson	Wendell
Lou Jane Kinlaw Rosser (Mrs. J. R.)	Jonesboro
Mayo Rosser	Jonesboro
Gladys Cecelia Rountrye	Aulander, R. 3
Pauline Rouse	Nashville
Dandridge Kellam Russell (Mrs. W. H.)	Biscoe
Mrs. Isabel Tobias St. Amand	Wilmington
Mary Saunders	Wakefield
Alma Ophelia Savage	Raleigh
John Ephraim Sawyer	Ayden
Mrs. Ella Ford Senter	Raleigh
Ella Neal Sherrod	Louisburg
Mrs. Mary Bates Sherwood	Raleigh
Sadie Leinster Simpkins	New Bern
Mrs. Lizzie Singletary	Clarkton
Florence Skillman	Warrenton
Annie Bell Smith	Oxford, R. 2
Bessie Mitchell Smith	Clarkton
Cody Hood Smith	Dunn

Name	*Postoffice*
Ethel Smith	Clarkton
Florence Sutphin Smith (Mrs. G. A.)	Raleigh
Kathleen Smith	Harmony
Lela Smith	Pink Hill
Ora Smith	Princeton
Thelma Smith	Vanceboro
Gertrude Martin Smitherman	East Bend
Mrs. Mary White Smithwick	Wendell
Hattie Irvin Stanfield	Mebane
Marjorie Steele	Lumberton
Mrs. David Stephenson	McCullers
Lena P. Stephenson	Raleigh, R. 4
Lillian Stephenson	Dunn
Lottie Stephenson	Dunn
Virginia Stephenson	McCullers
Mary Graham Stevens	Councils
Elizabeth Mabel Stewart	Whitakers
Myrtle Ila Stewart	Coats
Amy Gertrude Stone	Thomasville
Lela Strickland	Dunn
Lettie Strickland	Dunn
Hattie Jenkins Tayloe	Powellsville
Norvelle Templeton	Mooresville
Lizzie Zelma Terrell	Raleigh
Beulah Thomas	Cameron
Pattie Davis Thorne	Airlie
Georgia Thoroughgood	Vaughan
Gladys Burton Thoroughgood	Vaughan
Pauline Faison Thorp (Mrs. Louis)	Berea
Mabel Claire Tillman	Roxboro, R. 3
John Battle Tomlinson	Wilsons Mills
Mrs. Benjamin Tongue	Raleigh
Arrah Trevathan	Rocky Mount
William Lawrence Trevathan	Rocky Mount
Harry Zebulon Tucker	Madison
Onnie Luola Tucker	Louisburg
Gradabelle Turner	Ellerbe
Lina Bledsoe Turner	North Wilkesboro
Mary Burt Turner	Louisburg
Margaret Umberger	Rural Retreat, Wythe Co., Va
Mrs. Mollie Antoinette Vick	Margarettsville
Sadie Walton Vinson	Littleton
Jannie Elizabeth Ward	Rose Hil
Hattie Belle Warren	Littleton

Name	*Postoffice*
Fannie Warters	LaGrange
Mamie Frances Waterfield	Munden, Princess Anne Co., Va.
Elizabeth Hawkes Weaver (Mrs. C. J.)	Warren Plains
Fannie May Webb	Oxford
Barbara Weir	Elkin
Malissa Wellons	Princeton
Fonnie Simmons Westbrook	Kinston
Maude Westbrook	Bentonville
Lilly White	Raleigh
Bessie Whitted	LaGrange
Mrs. H. A. Williams	Youngsville
Mrs. Mattie Edgerton Williams	Louisburg
Ruby Williams	Barnesville
Vernie Sue Williams	High Point
Ethel Blanche Williford	Dunn, R. 1
Pearl Willis	Harkers Island
Mildred Wilson	Wilsons Mills
Mrs. Genadus Eustice Winston	Youngsville
Mamie Withers	Davidson
Annie Cheek Womble (Mrs. E. L.)	Raleigh
Mary Evelyn Womble	Cary
Kittie Wood	Garner, R. 1
Myrta Belle Woodard	Cary
Genevieve Woodson	Cary, R. 1
Azzie Estelle Woodward	Raleigh, R. 4
Fannie Woodward	Warsaw
Sallie Woodward	Warsaw
Eugenia Belle Woody	Woodsdale
Maggie Wooten	Macclesfield
Charles Langdon Wroton	Rock Hill, S. C.
Ada Yarborough	Cary
Estelle Yarborough	Cary
Lucy Helen Young	Louisburg

TEACHERS, COUNTY SCHOOL

Lucille Cozart Allen	Neuse
Ena Manis Baggett	Dunn
Mary Ball	Wood
Celestia Lane Banks	Raleigh, R. 3
Verdie Barttress Barefoot	Dunn
Callie Barnes	Creswell
Kathleen Barnhardt	Huntersville
Mary Tyson Barrow	Farmville
William Hocutt Bell	Old Trap

Name	*Postoffice*
Eleanor Blackley	Franklinton
Aileen Marie Blalock	Angier
Mary Dawson Branch	Wilson, R. 2
Sallie Braswell	Smithfield
Katy Burroughs	Warrenton
Reba Canfield	Morehead City
Kate Chaffin	Lillington
Cora Chaplin	Castalia
Zola Coats	Willow Springs
Mary Amanda Collie	Wendell
Sudie Catherine Collier	Buie's Creek
Lillie Creech	Durham
Minnie May Creech	Durham
Mary Anna Daniel	Walstonburg
Edna Davis	Marshallburg
Mary Dickson	Calypso
Bertha Dixon	Rose Hill
Grace Dixon	Benson
Emma Winifred Duke	Arcola
Sarah Ella Dunlap	Carthage
Olga Dunnagan	West Durham, R. 1
Ora Rigsbee Eakes (Mrs. E. O.)	Morrisville
Mabelle Alethea Edgerton	Kenly
Ossie Edwards	Vass
Eva Mae Ennis	Benson
Ila Greene Ennis	Buie's Creek
Pearl Farrell	Apex, R. 4
Algier Martha Finch	Bailey
Delia Belle Forbes	Shawboro
Mrs. Lola Mae Fort	Slocomb
Mabel Fuller	Franklinton
Claire Herbert Futrelle	Conway
Minnie Gay	Spring Hope
Pauline George	Four Oaks
Viola Elizabeth Goss	Wendell
Edna Greene	Zebulon
Eula Greene	Zebulon
Myrtle Gupton	Gupton
Ballard Harper	Nashville
Elizabeth Harris	Carthage
Sallie Harris	Carthage
Lemma Eva Harvey	Littleton
Stella Hassell	Creswell
Bettye High	Middlesex

Name	*Postoffice*
Grace High	Middlesex
Eva Lina Hockaday	Creedmoor
Clyde Hocutt	Garner
Nonie Hollingsworth	Bunn
Annie Lee Holoway	West Durham
Bessie Hoover	Old Fort
Christine Horton	Knightdale
Nannie Belle House	Louisburg
Josephine Link Howard (Mrs. J. R.)	Coats
Kate Hudson	Bentonville
Kate Hill Ihrie	Wendell
Okle Jackson	Dunn
Mary Rose Johnson	Saxapahaw, R. 1
Myrtle Johnson	Dunn
Eva Jones	McCullers, R. 1
Nannie Leathea Jones	Advance
Nannie Lee Jones	Beulaville
Ora E. Jones	Altamahaw, R. 2
Lector Belle Keith	Cardenas
Pattie Dawson Lambert	Ridgeway
Ruth Ida Lambert	Ridgeway
Lola Maie Langdon	Benson, R. 3
Chatte LeBette	Fairmont
Mrs. Johnny Lee	Four Oaks
Mary Lee	Newton Grove
Vestal Lee	Benson
Sallie Lyon	Neuse
Tera McLaurin	Fayetteville
Blanche Monroe	Biscoe
Lessie Moore	Franklinton
Glennie Morton	North Harlowe
Thelma Moss	Oxford, R. 2
Gladys Murray	Denniston, R. 1
Annie Laura Myrick	Littleton
Lottie Myrick	Littleton
Zela Althea Newman	Norlina
Vannie May Norris	Holly Springs
Annie Reece Odum	Conway
Ann Clellie O'Neal	Wake Forest
Minda O'Neal	Neuse, R. 2
Alda O'Quinn	Lillington
Lella Bryan Overton	Kittrell, R. 2
Mrs. Annie Parker	Pine Level
Lillian Parker	Seaboard

Name	*Postoffice*
Mary Parker	Dunn, R. 5
Beulah Johnson Parrish (Mrs. P. A.)	Benson
Sadie Arlene Parrish	Durham
Mary Patterson	Jackson Springs
Susan Payne	Sanford
Bunn Pearcé	Castalia
Lissie Mae Pearce	Princeton
Dora Ernestine Phelps	Creswell
Lucy Mae Pittman	Kenly
Beaufort A. Powell	Wake Forest, R. 1
Daisy Belle Prevatt	Buie
Allie Marie Pruitt	Franklinton
Edith Ray	Neuse, R. 3
Mrs. Esther Stephens Ray	Raleigh, R. 1
Gertrude Reams	Morrisville
Fleta May Ritter	Hemp
Grace Rogers	Delway
Kathleen Rogers	Rose Hill
Ruby Gulley Roycroft	Fuquay Springs
Ruth Sanderford	Creedmoor
Alda Sandlin	Beulaville
Estelle Simpkins	Raleigh
Mrs. Junius H. Smith	McCullers
Mamie Whitfield Smith	Seven Springs
Arline Stallings	Macon
Effie Stancil	Kenly
Alma Jones Stephens	Lillington
Chinnie Stephenson	Angier
Mrs Claude Stephenson	Willow Springs
Elgie Stephenson	Benson
Octavia Dorlas Stephenson	Angier
Gurtha Strickland	Bailey
Burlah Sturdivant	Castalia, R. 1
Lillian Taylor	Gumberry
Mary Lindia Tharrington	Rocky Mount, R. 3
Susie Lee Tharrington	Louisburg
Lōla Thomas	Jackson Springs
Esther Tuck	Timberlake, R. 1
Emily Turnage	Bath
Minnie Mae Turner	Olivia
Lena Tyner	Four Oaks
Clydia Wallace	Four Oaks
Bertha Ann Watson	Knightdale
Vena Watson	Kenly
Thelma Wheelous	Creedmoor, R. 1

Name	*Postoffice*
Katie Bet White	Zebulon
Eleanor Wilder	Franklinton
Lizzie Grey Wilder	Knightdale
Lacy Harriell Williams	Wake Forest
Lyllian Viola Williams	Bentonville
Ellie Williford	Moriah, R. 1
Lucile Winders	Faison
Beulah Young	Angier

DEMONSTRATION SCHOOL

Fourth and Fifth Grades

Harriet Bowden	Raleigh
Lawrence Covington, Jr.	Raleigh
Mildred Cullens	Raleigh
Martin K. Green	Raleigh
Thomas E. Green	Raleigh
William Grimes Haywood, Jr.	Raleigh
Nat Heyward	Raleigh
Rex Hudson	Raleigh
Robert Scott Hudson	Raleigh
Nancy Kendrick	Raleigh
Margaret Moss	Raleigh
Vincent Moss	Raleigh
Elizabeth Parker	Raleigh
Edith Randolph	Raleigh
James Riggan	Raleigh
Virginia Riggan	Raleigh
Carey Rogers	Raleigh
Elsie Underwood	Raleigh
James Vinson	Raleigh
Evangeline C. White	Raleigh
William White	Raleigh
Mary Laurens Withers	Raleigh
William Withers	Raleigh

First and Second Grades

William Anderson	Raleigh
L. W. Bowden, Jr.	Raleigh
Micou Browne	Raleigh
Bee Cotner	Raleigh
Clyde Cotner	Raleigh
Aulick Cullins	Raleigh
William E. DeLoatch	Gibsonville
Berenice Goodwin	Raleigh

Name	*Postoffice*
Henry Dockery Haywood	Raleigh
Seaman N. Hudson	Raleigh
J. B. Hunt, Jr.	Raleigh
Mary Helen Keller	Raleigh
Caroline Mann	Raleigh
Alexander Parker	Raleigh
Margaret Payne	Raleigh
Louise Riggan	Raleigh
Sadie Root	Raleigh
Betsie Jane Senter	Raleigh
Dorothy Mae Shipman	Raleigh
William Sumner, Jr.	Raleigh
Pauline Thorp	Berea
Claude Underwood	Youngsville
John Pescud Withers	Raleigh
Isabel Wolf	Raleigh

COTTON GRADING

Lowry Henry Allison	Franklinton
George Lambert Bailleux	Gozee, Hainaut Province, Belgium
Edwin Borden	Goldsboro
John Summerell Chamberlain	Raleigh
John Bee Cotner	St. Louis, Mo.
Edward Frank Crump	Smithfield
Tao-Shen Foo	Shanghai, China
Allen Harper	Whitakers
Frank Marion Harper, Jr.	Raleigh
Stephen Alston Hart	Mooresville
John Benbury Haywood	Raleigh
Laurens Jacobus Henning	Sweetwaters, Louis, Trichardt, S. Africa
Dudley Brown Hill	Warsaw
Charles Columbus Jordan	Royston, Ga.
John Smedes Knox	Raleigh
Charles Dennis Lee	Mount Olive
John Henry Lewis	Faison
Huey Michie	Raleigh
Zachariah Enniss Murrell	Jacksonville
Petrus Johannes Naude	Sofdell, Bethal, Transvael, S. Africa
Peter Philip Washington Plyler	Monroe
Patrick Percival Purnell	Franklinton
Henry Thomas Steele	Statesville
Walter Ford Taylor	Raleigh, R. 5
Petrus Ferreira van der Watt	Mexico, Maynard, O. F. S., S. Africa

NON-TEACHERS

Name	*Postoffice*
Jeannette Ball	Raleigh
Ethel Irene Baugh	Raleigh
Leona Ruth Baugh	Raleigh
Lizzie Pullen Belvin	Raleigh
Mrs. S. J. Busbee	Raleigh
Anna Holly Dearstyne (Mrs. R. S.)	Raleigh
Dorothy Lewis DeLamater	Raleigh
Mrs. Thomas Philmore Dellinger	Crossnore
Annie Louise Evans	Raleigh
Sadie Jarman	Louisburg
Virginia Hawkins Robards	Henderson
Harriet May Shay (Mrs. W. W.)	Raleigh
Josephine Shipman	Raleigh
Mrs. Jew Irvin Wagoner	Durham, R. 3
Katy van der Watt (Mrs. P. F.)	Raleigh

COLLEGE ENTRANCE

Jesse Oscar Anthony (Rehab.)	Belew Creek
William Ashby	Mount Airy
Blanche Louise Banks	Raleigh, R. 3
Gerald Raeden Blount (Rehab.)	Mackeys
Melissa Chamberlain	Raleigh
Elbert Daniel Cody (Rehab.)	Misenheimer
Isaac Carl Coggins	Bear Creek
Lloyd Henderson Cook (Rehab.)	Red Springs
Bessie Alline Davis	Raleigh, R. 4
Duncan Jennings DeVane (Rehab.)	Wilmington
John Ervin Duckworth (Rehab.)	Morganton
Walter Curtis Fitzgerald (Rehab.)	Thomasville
Katherine Harden	Raleigh
Levi Larmon Hedgpeth (Rehab.)	Greensboro
Margaret Lucille Johnson	Clayton, R. 3
James Wesley Lewis	Morehead City
Alma Louise Spencer	Fairfield
Joseph Jeremiah Vereen (Rehab.)	Raleigh
Mary Yarbrough	Raleigh

REHABILITATION STUDENTS

Name	*Course*	*Postoffice*
Benjamin Blaine Absher	Auto	Austin, R. 1
Roscoe Addison	Mech. Draft.	Durham, R. 6
Demetrio J. Araneta	Elec.	Atlanta, Ga.
George Elam Arney	Agr.	Lenoir, R. 5
Lewis Slocumb Autry	Agr.	Autryville, R. 1
Mahlon Stanley Baggett	Agr.	Buckhorn, Va.
Coy Eaton Bailey	Agr.	Raleigh
Alex. Frank Barbrey	M. E.	Goldsboro
Walter Lee Leon Barden	Agr.	Micro
John Harvey Barfield	Prac. Elec.	Fremont
William Hubart Barker	Poul.	Davidson, R. 2
Needham Boddy Barnes	Agr.	Goldsboro
Thomas Branch	Agr.	Kernersville, R. 4
Lorenzo Bruner Braswell	Agr.	Monroe, R. 2
Walter Moody Bray	Auto	Rockingham, R. 1
Charles Samuel Brooks	Auto	Bina
Herbert Mitchell Brown	Agr.	Denim Branch, Greensboro
James Arthur Bruce	Agr.	Randleman, R. 1
Thomas Newton Bryson	Agr.	Cullasaja
Thomas C. Butler	Tex.	Burlington, R. 7
Ernest Fiddillie Capps	Agr.	Hendersonville, R. 4
Hoyle Benjamin Carpenter	Agr.	Forest City, R. 3
Clinton Brackitt Carter	Agr.	Reidsville, R. 2
Henry Lou Carter	Agr.	Ingold, R. 1
James Lee Cathey	Prac. Elec.	Mooresville
Benjamin Oliver Chatham	Agr.	Fairview, R. 1
Michael Burriss Chinnis	Agr.	Phœnix, R. 1
Claud Donald Church	Agr.	Brownwood
John Hoyte Cline	Agr.	Lawndale
James Randall Coggin	Agr.	Eldorado
John Conner	Agr.	Fairview
Andrew Garrald Crawley	Try-out	Raeford
Lacey Martin Crowell	Agr.	Mount Gilead, R. 3
Preston Alexander Daniels	Agr.	Columbia, S. C.
Thomas Daniels	Agr.	Culberson, R. 1
William Lee Davis	Agr.	Raleigh
Millard Charles Dawson	P. Plt. Opr.	Ulah
Manuel David Dickerson	Auto	Durham
Andrew Osbon Eaker	Tex.	Shelby
Marion Gaston Eaker	Agr.	High Point
Riley Jerome Easter	Tex.	Lexington
Charles Elliott	Agr.	Rocky Mount, R. 5
Basil Riggan Ellis	Agr.	Railegh

Name	*Course*	*Postoffice*
Jerry Parker Elmore	Auto	Goldsboro, R. 5
William Henry Ennis	Prac. Elec.	Charlotte
William Marslender Evett	Agr.	Blounts Creek, R. 1
Fred Guy Fleming	Agr.	Creedmoor
Ben Lewis Flowers	Try-out	Fremont
Frank James Flynn	Agr.	Uree, R. 2
Foy Guy Fox	Auto	Gastonia, R. 4
Raymond L. Garner	Agr.	Newport
Charles Duncan Gilchrist	Agr.	Cameron, R. 2
Charles Ervin Glenn	Agr.	Black Mountain
Turner Martin Goff	Farm Mech.	Rocky Mount, R. 5
Patrick Winslow Goodson	Agr.	Denver
James McKinley Gray	Agr.	Broadway
William Franklin Hackney	Agr.	Scotland Neck, R. 2
Ray Hamilton	Auto	Sea Level
Claude Harris	Agr.	State Road, R. 2
Roe Lindsay Harris	Agr.	Fairfield
Arthur Washington Heatherly	Agr.	Canton, R. 1
Thomas Barnett Heddin	Agr.	Highland
Edward Helms	Agr.	Monroe
Huston Henderson	Agr.	Jennings, R. 2
James Edgar Hicks	Agr.	Marion, R. 1
Henry Clay Hobbs	Tex.	West Durham
Alvice Jay Holland	Agr.	Canton, R. 1
Haywood Witt Holt	Agr.	Raleigh, R. 3
William McPhail Holt	Farm Mech.	Sanford, R. 1
Troy Bascom Honeycutt	Tex.	Oakboro, R. 1
Fred McKinley Hyatt	Agr.	Weaverville
Frank Ivey	Auto	Clinton
Charley Corbitt Jolley	Farm Mech.	Henrietta
Andrew Jones, Jr.	Agr.	Catherine Lake, R. 1
Tillman Washington Jones	Auto	Franklin
Willie Love Jones	Agr.	Kerr, R. 1
Henry Maston Keen	Engr.	Goldsboro
Herman Edgar Kennedy	Prac. Elec.	Sanford
Keith Dargan King	P. Plt. Opr.	Cheraw, S. C.
James Henry Lambert	Auto Mech.	Henderson
Bennie Edgar Lewis	Agr.	Zebulon
Charles Lemuel Lewis	Agr.	Bostic, R. 4
Garland Lloyd	Auto	Maysville
Thomas Murry Lloyd	E. E.	Durham
Gerald Hoover Mahaffee	M. A.	Henrietta
Frank Donald Marcom	Prac. Elec.	Morrisville, R. 2
Jesse Ballard Martin	A. H.	Graham

Name	*Course*	*Postoffice*
Fletcher Andrew Mason	Agr.	Black Mountain, R.
Lorenzo Donald Massey	Agr.	Mount Olive, R.
Murphy Neill Matthews	Tex.	Lillingto
Ernest Alfred Melin	Agr.	Stamford, Con
David Brasker Melton	Agr.	Monroe, R.
Charles Stephen Miller	Agr.	Rougemo
Ellis Fleet Millsaps	Agr.	Hiddeni
Horace Montgomery	Agr.	Mineral Springs, R.
John Wheeler Moore	Agr.	Williamston, R.
William Allen Morton	Agr.	Maysvil
Ransom David Mull	Auto	Morgant
Clarence Page	Agr.	Barnesville, R.
David Russell Palmer	Agr.	Waynesville, R.
Irving Parsons	Try-out	Candor, R.
Claude Ferman Patterson	Arch. Draw.	Jackson Springs, R.
Walter Herbert Peake	Agr.	Green Mountai
George Willis Peele	P. Plt. Opr.	Goldsbo
Herbert Pender	P. Plt. Opr.	Selma, R.
Jacob Phifer	Agr.	Kings Mountai
Howard LaFayette Pierce	M. A.	Rocky Mou
William Tines Pitchford	Auto	Littleton, R.
Walter Roderic Porter	Mech. Draft.	Rocky Mou
James William Potter	Agr.	LaGrange, R.
Thamar Espron Propst	Poul.	Morganton, R.
Joshua Pulliam	Agr.	Roxbo
Franklin Kyle Quinn	Agr.	Asheville, R.
Emory Lee Ray	Agr.	State Road, R.
Ed. Cleveland Rayle	Agr.	Greensbo
Gurna Anthony Richardson	Agr.	Randleman, R.
James Samuel Rogers	Try-out	Monroe, R.
James Walter Rollins	Agr.	Randleman, R.
Carl E. Ross	Prac. Elec.	Greenville, R.
James Kelly Rosser	Prac. Elec.	Broadway, R.
John Perry Ryals	Agr.	Benso
Edgar Manton Satterthwaite	Agr.	Ransomville, R.
Graham Lane Savage	Agr.	Clarkton, R.
Everett Milton Senter	Mach.	Kiplin
Moses Leonard Sheppard	Agr.	Washingto
Garfield Zachary Shoaf	Elec.	Lexingto
Reid Banks Simpson	Agr.	Jonesboro, R.
Thomas Baxter Simpson	Agr.	Waxhaw, R.
Joseph Beecher Smart	Agr.	Union Mills, R.
William Mullington Smith	Agr.	Whiteville, R.
Kelton Norman Snipes	Agr.	Mario

Name	*Course*	*Postoffice*
Walter Bascom Sprinkle	Agr.	Murphy, R. 1
Jestie William Stallings	Agr.	Gilkey
Isaac Henry Stiwinter	Agr.	Scroll
Grady Columbus Stone	High Sch. Subj.	Winston-Salem
Samuel Edmond Sykes	Auto	Spring Hope, R. 2
Robert Hale Taylor	Agr.	Idlewild
Vestal Columbus Taylor	Agr.	Ararat
Sir Walter Raleigh Triplett	Poul.	Purlear, R. 1
Augustus Turner	Agr.	Marion
Francis Leon Venable	Agr.	Greensboro
John Craford Wadkins	Agr.	Entwistle
Ulysses Grant Walker	Agr.	Auburn
Alphonso DeKalb Wallace	Agr.	Batesburg, S. C., R. 2
Oswald Herbert Ward	Prac. Elec.	Wallace
Seymore Ward	Agr.	Vineland, Star Route
Charles Aycock Warwick	Auto	Wilmington
Ernest Tillman Waters	Agr.	Wilmington
Ernest Edward Watkins	Agr.	Macon
Harvey Martin Watson	P. Plt. Opr.	Yuma
Ballon Mabry Watts	Agr.	Nakina
Peter Ancell Webb	Tex.	Winston-Salem
Chester Beauregarde White	Agr.	Gliden
Norwood Wade Williams	Agr.	McCullers, R. 1
Wiley Hinton Williams	Auto	Washington, R. 3
Melton Augustus Worthington	Prac. Elec.	Grifton

THIRTY-SECOND ANNUAL COMMENCEMENT

MAY 31, 1921

DEGREES CONFERRED

Bachelor of Science

IN AGRICULTURE

Norman Alexander
Lindsey Otis Armstrong
Harvey Preston Brower
Samuel Lee Carpenter
Obed Castelloe
Joseph Stickney Chamberlain
Wilburn Bryan Collins
William Howard Corpening
Benjamin Franklin Daughety
Walter Connor Eagles
Perry Hamilton Gaston
Laurens Adams Hamilton
John William Harden, Jr.
Roy Arthur Hollowell
Oliver Knight Holmes
William Morton Johnston
Asbury Crouse Jones
William Hugh Jones
Charles Dickerson Kirkpatrick
John Haywood Lane
Joel Brevard Lawrence
Wilson Copes McCoy
John Daniel Miller
Augustus Ray Morrow
Emmett Brown Morrow
Victor Frederick Orlando Olivier
Dolphin Henry Overton
Edwin Pate
Edward Ancel Peterkin
James Robert Powell
Charles Louis Rackley
Wade Hampton Rice
Guy Rudisill Sipe
Atticus Morris Williams
David Carlyle Windley

IN CHEMICAL ENGINEERING

Judson Davis Albright, Jr.
Charles Davis Arthur, Jr.
James Percy Beal
Owens Hand Browne
Ernest William Constable
Robert Craig Ernst
Kirby Jernigan Quinn
Thomas Davis Roper, Jr.
Charles Edward Watson

IN TEXTILE CHEMISTRY AND DYEING

Andrew John Leddy

Bachelor of Engineering

IN CIVIL ENGINEERING

Claude Winifred Absher
Richard Von Biberstein
Robert Antine McColough Deal
Pleasant Leroy Kluttz Deaton
Arthur Spruill Jennette
Leslie LaFayette Jordan

Homer DeWitt Long
Manley Parker Moss
Lewis Bernard Peck
Jesse Harris Proctor
Geddie Blair Strickland
Junius Albert Temple
Duncan Alexander Wicker
Elmer Bernard Young
Thomas Grady Young

IN ELECTRICAL ENGINEERING

Hilton Worth Allsbrook
Robert Stuart Collins
Dewey Augustus Floyd
Bartholomew Moore Gatling, Jr.
John Gatling
Lev. Charles Guirkin
Frank Porter Huskin
John Keith Jones
William Andrew Franklin Lawing
Samuel Marsh Long
Warren Staten Mann
Theodore Ruggles Timby
John Dickson Wallace
Robert Edgar Williams, Jr.

IN MECHANICAL ENGINEERING

Basil Duke Barr
Henry Ottis Clodfelter
Robert Andrew Coughenour
Joseph Graham Evans
Judson Peele Johnson
John Clifton Terry
Sidney Jones Walters
Herbert Carlyle Weathers

IN TEXTILE MANUFACTURING

Samuel Creighead Alexander
Charles Snead Allen
Grady Washington Bowers
Fred Sherwood Childs
Louis Broaddus Daniel
Robert Cliff Hinkle
Richard Greene Kendrick
Edwin Clinard LeGrand
James Furman Lewis
Edward Branham Manning
Bartholomew Figures Moore
George King Murray
Josephus Daniels Pell
Martin Luther Rhodes
John Hollis Ripple
Otis Allen Zachary

ADVANCED DEGREES

Master of Science

COURSE IN AGRICULTURE

John Clarence Corl
John Bee Cotner
Dennis Henry Hall, Jr.
Carle Clark Zimmerman

Civil Engineer

John William Cox
John Bailey Pridgen

Electrical Engineer

Bascum Otto Austin
Robert Kenneth Babington
Richard Frederick Giersch, Jr.
Edgar Allen Hester
Walter Herbert Smith

Mechanical Engineer

Graham Hudson Anthony
Andrew Thomas Smith
Richard Vernon Terry

Honors in Scholarship

For 1920-1921

SENIOR CLASS

C. W. Absher
J. D. Albright, Jr.
O. H. Browne
W. C. Eagles
R. C. Ernst
A. J. Leddy
M. P. Moss
J. H. Proctor

JUNIOR CLASS

S. F. Mauney, Jr.
W. I. Pickens
E. G. Singletary
E. C. Tatum
A. H. Veazey

SOPHOMORE CLASS

A. M. Fountain
W. H. Jennings, Jr.

FRESHMAN CLASS

G. A. Chandler
F. S. Trantham

REHABILITATION STUDENTS

M. B. Chinnis
A. J. Honeycutt

MEDALS AWARDED

National Association of Cotton Manufacturers

R. C. Hinkle

Graduating Oration

M. P. Moss

REGISTER OF GRADUATES

Name	*Degree*	*Address*
CLAUD SHUFORD ABERNETHY	B.E. 1916	Hickory, N. C.
Member of firm, Abernethy Hardware Co.		
DURANT STEWART ABERNETHY	B.E. 1906	Washington, D. C.
Vice President, Southern Railway Short Lines		
LEROY FRANKLIN ABERNETHY	B.Agr. 1905	Hickory, N. C.
Cashier, Consolidated Trust Co.		
CLAUDE WINIFRED ABSHER	B.E. 1921	Mount Airy, N. C.
Assistant Engineer, with I. W. Barber, Engineer		
EDWARD ANDREWS ADAMS, JR.	B.E. 1919	Raleigh, N. C.
Bridge Repair Department, N. C. State Highway Com.		
NELSON ADAMS	B.E. 1904	McColl, S. C.
Farmer		
HUDSON DAVIS ALBRIGHT, JR.	B.S. 1921	Charlotte, N. C.
HAYWOOD LEWIS ALDERMAN	B.E. 1904	Greensboro, N. C.
President, The Service Press, Inc.		
HENRY MILTON ALEXANDER	B.E. 1915	Manila, P. I.
First Lieutenant, Ninth Cavalry, U. S. A		
KEMP ALEXANDER	B.E. 1900	Ashboro, N. C.
Superintendent, Acme Hosiery Mills		
NORMAN ALEXANDER	B.S. 1921	Apex, N. C.
Agricultural Teacher, Apex Graded School		
NEILY ORMOND ALEXANDER	B.S. 1912	R. 17, Matthews, N. C.
Farmer		
SAMUEL CRAIGHEAD ALEXANDER	B.E. 1921	Chester, Pa
With Aberfoyle Manufacturing Co.		
WILLIAM DAVIDSON ALEXANDER, JR.	B.S. 1899	Charlotte, N. C.
Consulting Drainage Engineer		
BONVA CLOSSON ALLEN	B.E. 1918	Moore, Pa.
Engineering Department, Westinghouse Electric and Manufacturing Co.		
CHARLES SNEAD ALLEN	B.E. 1921	Weldon, N. C.
Assistant Teller, Bank of Weldon		
DANIEL ALLEN	B.S. 1896	Raleigh, N. C.
Farmer and Real Estate Dealer		
GEORGE GILDEROY ALLEN	B.E. 1906	Kannapolis, N. C.
Assistant Superintendent, Cannon Mills		
LESLIE LYLE ALLEN	B.E. 1900	Spartanburg, S. C.
Cotton Merchant		
ROBERT WILSON ALLEN	B.E. 1893	Wadesboro, N. C.
County Superintendent of Schools		
WILLIAM GASTON ALLEN	B.E. 1920	Raleigh, N. C.
With State Highway Commission		
HILTON WORTH ALLSBROOK	B.E. 1921	Greenville, N. C.
With Cheatwood-Driscoll Co., Paving Contractors of Richmond, Va.		
LEWIS ALLEN AMMON	B.S. 1913	Box 51, Mecosta, Mich.
Dairyman		
CHARLES SIDNEY ANDREWS	B.E. 1914	Raleigh, N. C.
Salesman, Southern School Supply Co.		
GRAHAM HUDSON ANTHONY	B.E. 1914	Hartford, Conn.
M.E. 1921. Vice President and Secretary, Allen Manufacturing Co.		
OLIVER STANHOPE ANTHONY	B.E. 1916	Shelby, N. C.
Anthony & Anthony, Real Estate		
JOHN CAMILLUS APP	B.S. 1908	Charleston, W. Va.
Chemist, U. S. Public Service Reserve		
JOHN ALLEN AREY	B.S. 1909	Raleigh, N. C.
With N. C. Extension Service		
LINDSEY OTIS ARMSTRONG	B.S. 1921	Raleigh, N. C.
Instructor Vocational Education, N. C. State College. Half-time Agriculture Teacher, Cary High School		
CHARLES DAVIS ARTHUR, JR.	B.S. 1921	Raleigh, N. C.
With Department of Public Works		

Name	*Degree*	*Address*
GILBERT LUTHER ARTHUR, JR.	B.S. 1913	Raleigh, N. C
Chemist, State Department of Agriculture		
JOHN W. ARTZ	B.S. 1917	Old Fort, N. C
Union Tanning Co.		
DORSEY FROST ASBURY	B.S. 1898	Washington, D. C
Office, National Savings and Trust Building		
GEORGE PAGE ASBURY	B.E. 1906	Charlotte, N. C
Office Engineer, Southern Railway System (Lines East)		
SAMUEL ERSON ASBURY	B.S. 1893	College Station, Texa
M.S. 1896. Assistant State Chemist		
SYDNEY WOODWARD ASBURY	B.E. 1904	Wallville, Mo
Farmer		
LEWIS CARROLL ATKISSON	B.E. 1915	Greensboro, N. C
With H. F. Livermore Co., Boston, Mass.		
BASCUM OTTO AUSTIN	B.E. 1914	Wilkinsburg, P
E.E. 1921. Design Engineer, Westinghouse Electric and Manufacturing Co.		
WILBURN CLEGG AUSTIN	B.E. 1920	North Charlotte, N. C
Heating Engineer and Draftsman, The Grinnell Co., Inc.		
GEORGE GANZER AVANT	B.E. 1918	Wilmington, N. C
Efficiency and Combustion Engineer, Tidewater Power Co.		
JOHN WILLIAM AVERA	B.S. 1917	Winston-Salem, N. C
With B. F. Huntley Furniture Co.		
ROBERT JAMES AVERY	B.Agr. 1905	Morganton, N. C
Contractor		
ROBERT KENNETH BABINGTON	B.E. 1910	Atlanta, G
E.E. 1921. With Southern Bell Telephone and Telegraph Co.		
CHARLES ALBION BACHE	B.E. 1913	Merritt, Fl
Orange Grower and Real Estate Operator		
OSCAR LUTHER BAGLEY	B.S. 1905	Goldsboro, N. C
Salesman, Wholesale Groceries		
EUGENE CLEVELAND BAGWELL	B.E. 1904	Savannah, G
Superintendent, Seaboard Air Line Railway		
CLARE RUSSELL BAILEY	B.S. 1914	Chadbourn, N. C
Farmer		
HUGH MARCELLUS BAILEY	B.S. 1914	Woodleaf, N. C
Farmer		
ROGER MOORE BAILEY	B.S. 1913	Elm City, N. C
Member of Firm, John L. Bailey & Sons		
WILLIAM BAILEY	B.E. 1911	Raleigh, N. C
With Carolina Power and Light Co.		
WADE VANCE BAISE	B.E. 1920	Raleigh, N. C
Assistant Engineer, N. C. State Highway Commission		
BRUCE CRAYTON BAKER	B.E. 1920	Lancaster, S. C
Lancaster Cotton Mills		
CHARLES VERNON BAKER	B.E. 1916	Raleigh, N. C
State Highway Commission		
FRED ALLEN BAKER	B.E. 1916	Nashville, Ten
Engineer, Cumberland Telephone and Telegraph Co.		
FRANK OSCAR BALDWIN	B.S. 1908	Richmond, V
Supervisor of Settling Basins and Laboratory, Richmond City Waterworks		
WILLIAM HERBERT DOUGHTY BANCK	B.E. 1908	Wilmington, N. C
Civil Engineer		
IRA WILSON BARBER	B.S. 1899	Mount Airy, N. C
Engineer		
JAMES CLAUDIUS BARBER	B.E. 1904	R. 1, Barber, N. C
Farmer		
TOLLIE CHESTER BARBER	B.E. 1911	Mount Airy, N. C
Secretary-Treasurer, Renfro Hosiery Mills Co.		
WILLIAM WALTON BARBER	B.E. 1904	Ammon, V
Farmer		
FLETCHER HESS BARNHARDT	B.E. 1901	Phoenixville, P
C.E. 1919. The Phoenix Bridge Co.		
JAMES MONROE BARNHARDT	B.S. 1918	Urbanna, V
Farmer		

Name	*Degree*	*Address*
ASIL DUKE BARR	B.E. 1921	West Jefferson, N. C.
Operator, Builders Supply Co.		
ILLIAM ALEXANDER BARRETT	B.E. 1904	Bremerton, Wash.
In United States Navy Yard		
EORGE FRANCIS BASON	B.E. 1908	Ithaca, N. Y.
M.E. 1916. Cornell, Instructor, Cornell University		
RE WILSON BASON	B.S. 1916	R. 1, Burlington, N. C.
Agricultural Teacher, Friendship High School		
ERBERT SCANDLIN BATTIE	B.E. 1907	Greensboro, N. C.
District Sales Manager, Marchant Calculating Machine Co.		
HN ROBIN BAUCOM	B.S. 1917	R. 2, Raleigh, N. C.
Farmer		
MUEL OTTO BAUERSFELD, JR.	B.S. 1919	Hamlet, N. C.
Orchardist		
HOMAS LEVINGSTON BAYNE, JR.	B.S. 1914	Ithaca, N. Y.
Assistant in Rural Education, Cornell University		
ALTER ROBERT BAYNES	B.S. 1920	Columbus, Ohio
Senior in Veterinary Course, Ohio State College		
MES PERCY BEALE	B.S. 1921	Marthaville, La.
Teacher, Natchitoches Parish, La.		
HN MANN BEAL	B.S. 1911	Agricultural College, Miss.
M.S. 1913. Miss. A. and M. Professor of Botany and Forestry, Miss. A. and M. College; Botanist for Miss. Agricultural Experiment Station		
ARVIN EDDLEMAN BEATTY	B.E. 1916	Monroe, N. C.
State Highway Commission		
MES CLAUDIUS BEAVERS	B.Agr. 1906	Guilford, College, N. C.
Farmer, Poultryman and Agricultural Writer		
DNEY HAMILTON BECK	B.S. 1898	Not located
HN LELAND BECTON	B.E. 1908	Wilmington, N. C.
C. E. 1813, Civil Engineer		
ARWOOD BEEBE	B.E. 1908	Spartanburg, S. C.
Consulting Engineer		
HOMAS AMBROSE BELK	B.S. 1918	Mount Holly, N. C.
Farmer		
HARLES EDWARD BELL	B.S. 1911	Gainesville, Fla.
Chemist, Florida Experiment Station, University of Florida		
REDERICK NEIL BELL	B.E. 1918	East Pittsburgh, Pa.
Engineer, Westinghouse Electric and Manufacturing Co.		
EEDHAM ERIC BELL	B.S. 1906	Montgomery, Ala.
Jemison & Co., Inc., of Birmingham, Farm Loans Division		
AY LANG BENBOW	B.S. 1918	Oak Ridge, N. C.
Teacher, Commercial Honey Producer and Farm Manager		
HN SAMUEL BENNETT	B.E. 1916	Chapel Hill, N. C.
Superintendent of Operations, University of North Carolina		
ILLIAM OSBORNE BENNETT	B.E. 1901	Maxton, N. C.
Manager, Elba Manufacturing Co.		
OBERT LINN BERNHARDT	B.S. 1900	Salisbury, N. C.
Secretary-Manager, Salisbury Hardware and Furniture Co., and Breeder of Shorthorn Cattle		
ESLIE GRAHAM BERRY	B.E. 1900	Charlotte, N. C.
President Southern Engineering Co.		
ILMER ZADOCK BETTS	B.E. 1918	Raleigh, N. C.
With Bridge Department, State Highway Commission		
ERMAN VON BIBERSTEIN	B.E. 1914	Charlotte, N. C.
Draftsman, R. C. Biberstein, Mill Architect and Engineer		
ICHARD VON BIBERSTEIN	B.E. 1921	Fayetteville, N. C.
Instrumentman, N. C. State Highway Commission		
HN HENDERSON BIRDSONG	B.S. 1899	Chicago, Ill.
Chief Chemist and Metallurgist, The National Malleable Castings Co.		
DE PITTMAN BIVENS	B.E. 1907	Gastonia, N. C.
Secretary and Treasurer, Michael & Bivens, Inc.		
AMES ADRIAN BIZZELL	B.S. 1895	Ithaca, N. Y.
M.S. 1900. Ph.D. 1903, Cornell University, Professor of Soil Technology		

Name	*Degree*	*Address*
FRED MCCULLOUGH BLACK	B.E. 1910	Milwaukee, Wis.
Salesman, Westinghouse Electric and Manufacturing Co.		
JAMES CYRUS BLACK	B.S. 1920	Badin, N. C.
With Research Department of Aluminum Company of America		
KENNETH LEON BLACK	B.E. 1906	Richmond, Va.
President and Treasurer of K. L. Black & Co., Inc., Engineers and General Contractors		
WILLIAM LAMAR BLACK	B.E. 1908	Key West, Fla.
With South Florida Contracting Co.		
ENOS CLARKSON BLAIR	B.S. 1914	Raleigh, N. C.
Agronomist, N. C. Extension Service		
TYSON YATES BLANTON	B.S. 1917	Kelso, Wash.
County Agricultural Agent		
BEVERLEY MOSS BLOUNT	B.E. 1915	Cary, N. C.
Department of Science, Cary High School		
GEORGE BENJAMIN BLUM	B.S. 1918	Lexington, N. C.
County Agent, Davidson County		
WILLIAM MORTON BOGART	B.E. 1903	Not located
ALLISON HODGES BOND	B.E. 1912	Columbus, Ohio
General Superintendent, The Kilbourne & Jacobs Manufacturing Co.		
THOMAS SAWYER BOND	B.E. 1910	Palestine, Texas
Assistant Chief Engineer, International and Great Northern Railway		
LESLIE NORWOOD BONEY	B.E. 1903	Wilmington, N. C.
Architect		
FRED WILHELM BONITZ	B.E. 1901	Baltimore, Md.
Maintenance Engineer, Standard Oil Co.		
JOHN HENRY WILLIAM BONITZ	B.E. 1920	Wilmington, N. C.
Architectural Inspector, A. C. L. R. R. Co., President and General Manager, Beach Water Co.		
JAMES SHEPHERD BONNER	B.E. 1916	Nashville, Tenn.
Exchange Engineer, Cumberland Telephone and Telegraph Co.		
WILLIAM DAVID BOSEMAN	B.E. 1902	Rocky Mount, N. C.
Farmer		
BARRETT WOODWARD BOULWARE	B.E. 1917	Carbonton, N. C.
Electrical Construction Work		
ZOLLY MOSBY BOWDEN	B.E. 1901	Plant City, Fla.
Electrician, Coronet Phosphate Co.		
EDWIN DENNIS BOWDITCH	B.S. 1913	Raleigh, N. C.
State Specialist in Gardening, State Horticultural Division		
ROY BOWDITCH	B.E. 1910	Norton, Va.
Electrical Engineer, West Virginia Engineering Co.		
GRADY WASHINGTON BOWERS	B.E. 1921	Inman, S. C.
With Inman Cotton Mills		
ALAN THURMAN BOWLER	B.E. 1912	Raleigh, N. C.
Secretary North Carolina Bonders Association		
RODNEY LAW BOYLIN	B.S. 1916	Not located
ASA GRAY BOYNTON	B.E. 1908	Blowing Rock, N. C.
Landscape Architect		
ZEB BOYCE BRADFORD	B.E. 1917	Kannapolis, N. C.
With Cannon Manufacturing Co.		
CARL RAY BRADLEY	B.E. 1910	St. Louis, Mo.
Electrical Engineer (Large Motor Division), Wagner Electric Manufacturing Co.		
CLARENCE ANDERSON BRAME	B.S. 1919	R. 3, Lucama, N. C.
Farmer. With Banner Warehouse of Wilson, N. C.		
JAMES WASHINGTON BRAWLEY	B.S. 1895	Greensboro, N. C.
Vice President and Treasurer, Real Estate and Trust Co.		
JOHN BENJAMIN BRAY	B.E. 1911	Raleigh, N. C.
Commissioner of Public Works, City of Raleigh		
VICTOR WINFRED BREEZE	B.E. 1914	Charlotte, N. C.
With Southern Engineering Co.		
THOMAS JOHNSON BREVARD	B.S. 1910	Flint, Mich.
2025 Winans Avenue		

Name	*Degree*	*Address*
CHARLES MEEKINS BRICKHOUSE	B.S. 1914	Kinston, N. C.
Farm Demonstration Agent		
WILLIAM STALEY BRIDGES	B.E. 1919	Raleigh, N. C.
Instructor in Auto Mechanics, N. C. State College		
HERMON BURKE BRIGGS	B.E. 1913	Red Bluff, Cal.
M.E. 1916. Kaiser Paving Co.		
CLAY DWIGHT BRITTAIN	B.E. 1916	Savannah, Ga.
Signal Inspector, S. A. L. Railway		
RALPH BROOKS	B.S. 1916	Alliance, N. C.
Farmer		
THOMAS WESTMERO BROOKS	B.E. 1916	Hilton Village, Va.
Engineering Department, Newport News Shipbuilding and Dry Dock Co.		
BENJAMIN ALEXANDER BROOM	B.E. 1905	Sioux City, Iowa
Consulting Mechanical and Electrical Engineer		
CECIL DEWITT BROTHERS	B.E. 1909	New York, N. Y.
160 Front Street		
HARVEY PRESTON BROWER	B.S. 1921	Creedmoor, N. C.
Teacher, Creedmoor High School		
BEDFORD JETHRO BROWN	B.E. 1901	Charlotte, N. C.
Superintendent of Meter Department, Southern Power Company		
BRYCE BENJAMIN BROWN	B.E. 1918	Schenectady, N. Y.
Testing Department of General Electric Co.		
CLAYTON EDWARD BROWN	B.E. 1912	Washington, D. C.
Assistant Engineer, Southern Railway		
FRANK HAMILTON BROWN	B.Agr. 1908	Cullowhee, N. C.
Teacher of Science and Agriculture, Cullowhee Normal and Industrial School		
JOEL EDWARD BROWN	B.S. 1911	Grimes, Cal.
With Standard Oil Co.		
JAMES HOWARD BROWN	B.S. 1911	Rich Square, N. C.
M.S. 1912. D.V.M. 1914, Kansas City Veterinary College. Veterinarian		
WILLIAM BACHMAN BROWN	B.E. 1911	Charlotte, N. C.
Maintenance of Way Department, Southern Railway Co.		
OWENS HAND BROWNE	B.S. 1921	Baltimore, Md.
Graduate Student, Johns Hopkins University		
JOSEPH BRANDON BRUNER	B.S. 1915	Los Angeles, Cal.
With Blyth, Witter & Co., Bonds		
STEPHEN COLE BRUNER	B.S. 1912	Santiago de las Vegas, Cuba
Chief, Department of Plant Pathology, Estacion Agronomica de Cuba		
THOMAS KINCAID BRUNER	B.E. 1910	Memphis, Tenn.
Water Department, Bohlen-Huse Coal and Ice Co.		
CARNEY JOHN BRYAN	B.E. 1907	Panama City, Fla.
C. J. Bryan & Co., Wholesale Fish Dealers		
JOHN HARVEY BRYAN	B.E. 1908	New York, N. Y.
M.E. 1913. Steel Sales Agent, 50 Church St.		
KIT BRYAN	B.E. 1911	Charlotte, N. C.
State Highway Commission		
DALLAS MARION BUCHANAN	B.S. 1920	Durham, N. C.
Tobacco Buyer, Liggett & Myers Tobacco Co.		
JAMES RAMSEY BUCHANAN	B.E. 1914	Sylva, N. C.
Chief Engineer, Sylva Tanning Co.		
ELTON ELROY BUCK	B.E. 1910	Bridgeport, Conn.
101 Sanford Place		
GEORGE CLEVELAND BUCK	B.S. 1916	Castalia, N. C.
Superintendent, Vocational Training School		
JOSEPH SAMUEL BUFFALOE	B.S. 1897	Garner, N. C.
Physician		
HARLEY WILSON BULLARD	B.S. 1914	Orrum, N. C.
Teacher of Agriculture, Orrum Vocational High School		
WALTER AUSTIN BULLOCK	B.S. 1895	Red Springs, N. C.
Farmer		
WILLIAM CAREY BUNCH	B.S. 1920	Edenton, N. C.
U. S. Bureau of Fisheries, Edenton Station		
JAMES HARRY BUNN	B.E. 1900	Henderson, N. C.
Superintendent, Henderson Cotton Mills and Croatan Spinning Mills		

Name	*Degree*	*Address*
NOAH BURFOOT, JR.	B.E. 1917	Elizabeth City, N. C.
Superintendent, Pasquotank Hosiery Mills		
WILLIAM BRYANT BURGESS	B.E. 1908	Norfolk, Va.
Supervising Draftsman, Government Navy Yard, Norfolk		
GEORGE EDWARD BUSH	B.E. 1919	Akron, Ohio
Fabric Department, Firestone Tire and Rubber Co.		
WILLIAM ANDERS BUYS	B.E. 1906	Belhaven, N. C.
Manager, The Interstate Cooperage Co.		
VON PORTER BYRUM	B.E. 1911	R. 1, Catawba, N. C.
Station Superintendent, Southern Power Co., Lookout Shoals Station		
BRICE LEGRIER CALDWELL	B.S. 1913	Vicksburg, Miss.
District Chemist, The Refuge Cotton Oil Co.		
ROBERT OLIN CALDWELL	B.S. 1914	R. 1, Concord, N. C.
Farmer		
WALTER GRAHAM CALDWELL	B.S. 1914	Scott, Miss.
Plantation Manager, Delta and Pine Land Co. of Mississippi		
LINDSAY FERGUSON CARLETON	B.E. 1907	St. Louis, Mo.
Manager, Electric Department, Johns-Manville, Inc.		
CLAUDIUS LEROY CARLTON	B.E. 1916	Tulsa, Okla.
Sales Engineer, Foamite Firefoam Co.		
JOHN CLINE CARPENTER	B.E. 1915	Charlotte, N. C.
District Maintenance Engineer, N. C. State Highway Commission		
JOHN SAMUEL PINKNEY CARPENTER	B.E. 1903	Philadelphia, Pa.
Treasurer of the Mauney-Steel Co., Cotton Yarns		
SAMUEL LEE CARPENTER	B.S. 1921	China Grove, N. C.
Teacher of Agriculture, Rowan County Farm-Life School		
JOHN WILLIAM CARROLL	B.S. 1897	Wallace, N. C.
Physician		
ALMON HILL CARTER	B.S. 1916	Wallace, N. C.
Farmer		
JOHN MANN CARTER	B.E. 1915	Lynchburg, Va.
President, National Paint and Manganese Co.		
HENRY BROZIER CARTWRIGHT	B.E. 1905	Jacksonville, Fla.
Assistant Engineer, Valuation Department, Seaboard Air Line Railway Co.		
OBED CASTELLOE	B.S. 1921	Aulander, N. C.
Farmer		
HENRY ROY CATES	B.S. 1911	Atlanta, Ga.
Crop Investment Department, Hartford Fire Insurance Co.		
JUNIUS SIDNEY CATES	B.S. 1902	R. 1, Rosslyn, Va.
M.Agr. 1904. Ph.D., American University, 1915. Agricultural Journalist		
JOHN SUMMERELL CHAMBERLAIN	B.S. 1920	Raleigh, N. C.
With Caraleigh Fertilizer Co.		
JOSEPH STICKNEY CHAMBERLAIN	B.S. 1921	Kanona, N. Y.
Farmer		
WILLIAM MILLER CHAMBERS	B.E. 1905	Maben, W. Va.
Pay Roll Man, W. M. Ritter Lumber Co.		
JAY VICTOR CHAMPION	B.E. 1916	Baltimore, Md.
District Manager, Nitrate Agencies Co.		
WILLIAM CLAYBORNE CHEEK	B.E. 1920	Buffalo, N. Y.
Sales Engineer, Worthington Pump and Machinery Corporation		
HARPER NICHOLSON CHERRY	B.S. 1918	Vanceboro, N. C.
Teacher Vocational Agriculture, Craven County Farm-Life School		
LOUIS GORHAM CHERRY	B.E. 1916	Raleigh, N. C.
612 Harp St.		
MARK HOPKINS CHESBRO	B.Agr. 1906	Kelowna, B. C.
Pruning School Instructor, Provincial Department of Agriculture		
FRED SHERWOOD CHILDS	B.E. 1921	Not located
CONNER CALHOUN CLARDY	B.E. 1906	San Diego, Cal.
Electrical Engineer, C. C. Clardy Co.		
CHARLES EDWARD CLARK	B.S. 1897	R. 5, Rocky Mt., N. C.
Market Gardener		
CLETE WALTON CLARK	B.S. 1916	Castleberry, Ala.
Truck Farmer		

Name	*Degree*	*Address*
DAVID CLARK	B.E. 1895	Charlotte, N. C.
M.E. 1896; C.E. 1897. Owner and Editor, Southern Textile Bulletin		
JAMES DUNCAN CLARK	B.S. 1906	Tampa, Fla.
President, Peninsular Paper Co.		
JOHN WASHINGTON CLARK	B.E. 1906	West Durham, N. C.
B.E. (Tex.) 1907. Superintendent, Erwin Bleaching and Finishing Plant		
THORNE MCKENZIE CLARK	B.E. 1909	Lincolnton, N. C.
Treasurer and General Manager, Anderson Cotton Mills		
WALTER CLARK, JR.	B.E. 1903	Charlotte, N. C.
LL.B. 1905; LL.M. 1906. Lawyer		
WILLIAM ALEXANDER GRAHAM CLARK	B.S. 1897	Washington, D. C.
M.E. 1899; M.E. Cornell University, 1900. Textile Expert to Tariff Commission		
SAMUEL HERBERT CLARKE	B.E. 1906	Baltimore, Md.
2345 Eutaw Place		
HENRY CALEB CLAY	B.E. 1911	Moore, Mont.
Ranchman		
WILEY THEODORE CLAY	B.E. 1906	Sao Paula, Brazil
M.E. 1910. Construction work with M. E. Church, South, Board of Missions		
AMOS BAXTER CLEMENT	B.E. 1913	Oxford, N. C.
Oxford Hardware Co.		
GEORGE LATTA CLEMENT	B.S. 1919	Asheville, N. C.
Manager, Elk Mountain Orchard Co.		
WILLIAM RANDOLPH CLEMENTS	B.E. 1913	Dayton, Ohio
Sales Engineer, The Master Electric Co.		
AMBROSE SCHENCK CLINE	B.S. 1917	R. 2, Lincolnton, N. C.
Farmer		
FRANKLIN DEWEY CLINE	B.E. 1920	Washington, N. C.
Asphalt Plant Foreman, R. G. Lassiter and Co.		
HENRY OTTIS CLODFELTER	B.E. 1921	Asheville, N. C.
Instructor Mechanical Drawing, Asheville High School		
EDWARD LAMAR CLOYD	B.E. 1915	Raleigh, N. C.
Dean of Students, N. C. State College		
EDWIN LACY COBLE	B.S. 1914	Raleigh, N. C.
ROBERT BAXTER COCHRAN	B.E. 1902	East Norwood, Ohio
With Allis-Chalmers Manufacturing Co., Bullock Works		
JAMES KIRK COGGIN	B.S. 1920	Cary, N. C.
Teacher Vocational Agriculture, Cary High School		
ANSON ELIKEM COHOON	B.S. 1898	Elizabeth City, N. C.
Farmer		
JOHN ELIOT COIT	B.Agr. 1903	Los Angeles, Cal.
Consulting Horticulturist, 1225 S. Normandie Ave.		
THOMAS ALEXANDER COLE	B.S. 1913	Carthage, N. C.
Farmer and Mill Man		
JOHN CALHOUN COLLIER	B.E. 1916	West Allis, Wis.
With Allis-Chalmers Manufacturing Co.		
PAUL COLLINS	B.S. 1901	Philadelphia, Pa.
Chemist, I. P. Thomas & Son Co.		
ROBERT STUART COLLINS	B.E. 1921	Wilmington, N. C.
Rodman, State Highway Commission		
WILBURN BRYAN COLLINS	B.S. 1921	Raleigh, N. C.
Contractor		
WILLIAM THOMAS COMBS	B.E. 1918	Washington, D. C.
Junior Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey		
GUY WINSTON COMMANDER	B.S. 1915	R. 4, Berkley, Va.
Truck Farmer		
ERNEST WILLIAM CONSTABLE	B.S. 1921	Chapel Hill, N. C.
Graduate Student, University of North Carolina		
HENRY BACON CONSTABLE	B.S. 1915	Charlotte, N. C.
E. I. Du Pont de Nemours & Co.		
CECIL EDWARDS COOKE	B.S. 1920	Graham, N. C.

Name	*Degree*	*Address*
CHARLES KEARNEY COOKE, JR.	B.E. 1918	Louisburg, N. C.
Highway Engineer		
EVERETT HANSON COOPER	M.S. 1916	Greenville, N. C.
With Export Leaf Tobacco Co.		
JAMES WESLEY COOPER	B.E. 1919	Henderson, N. C.
Assistant Superintendent, Harriet Cotton Mills		
JOHN DOWNEY COOPER	B.E. 1911	Henderson, N. C.
Superintendent, Harriet Cotton Mills, Nos. 2 and 3. President, Farmers and Merchants Bank		
SAMUEL ALLEN COOPER	B.S. 1920	Not located
GEORGE WASHINGTON CORBETT, JR.	B.E. 1895	R. 2, Currie, N. C.
Lumberman and Merchant		
WILLIAM S. CORBITT	B.E. 1916	Henderson, N. C.
With Corbitt Motor Truck Company		
JOHN CLARENCE CORL	M.S. 1921	Berkeley, Cal.
Instructor, University of California		
CHARLES EDWARD CORPENING	B.E. 1894	R. 2, Lenoir, N. C.
Farmer and Lumber Dealer		
WILLIAM HOWARD CORPENING	B.S. 1921	College Station, Texas
Instructor in Agronomy, Texas A. & M. College		
MILTON LEE CORRELL	B.S. 1916	Gibson, N. C.
Teacher, Gibson High School		
JOHN BEE COTNER	M.S. 1921	Raleigh, N. C.
Instructor in Farm Crops, N. C. State College		
EDWARD LIVINGSTON COTTON	B.E. 1911	Badin, N. C.
Proprietor, Meat Market and Grocery Store		
LLEWELLYN HILL COUCH	B.E. 1908	Raleigh, N. C.
Vice President and General Manager, North State Power Company; Utility Light and Power Company, and Cape Fear Railways, Inc.		
ROBERT ANDREW COUGHENOUR	B.E. 1921	Norwood, Pa.
With Westinghouse Electric and Manufacturing Company		
WALTER MILLER COWLES	B.E. 1909	Pittsburgh, Pa.
Service Manager, Norton Motor Company		
DAVID COX	B.E. 1894	Norfolk, Va.
746 Graydon Park. Public Surveyor and Civil Engineer		
DAVID DAVIES COX	B.E. 1914	Ensley, Ala.
Tennessee Coal, Iron and Railroad Company		
DUNCAN ARCHIBALD COX	B.S. 1906	Rowland, N. C.
Manager, Hub Hardware Company		
GEORGE CHANDLER COX	B.E. 1917	Raleigh, N. C.
Assistant Professor, Electrical Department, N. C. State College		
JOHN WILLIAM COX	B.E. 1915	Bagley, N. C.
C.E. 1921. Junior Hydrographic Engineer, U. S. Coast and Geodetic Survey		
SAINT JOHN COX	B.E. 1914	Ensley, Ala.
Instrument Engineer, Sloss-Sheff. Steel & Iron Co.		
FRANCIS EDWIN COXE	B.E. 1917	R. 2, Bennettsville, S. C.
LELAND MIOT CRAIG	B.E. 1914	Charlotte, N. C.
Vice President, Southern Engineering Co.		
SHERMAN GRADY CRATER	B.S. 1916	Raleigh, N. C.
Educational Representative, J. B. Lippincott Co.		
JOHN BENNETT CRAVEN	B.S. 1913	Chicago, Ill.
Superintendent, Peoples Gas, Light and Coke Co.		
WILLIAM LOIS CRAVEN	B.E. 1901	Raleigh, N. C.
Bridge Engineer, State Highway Commission		
SIDNEY MOTT CREDLE	B.E. 1916	Tarboro, N. C.
Civil Engineer		
WOODFIN GRADY CREDLE	B.S. 1914	R. 2, Swan Quarter, N. C.
CHARLES LESTER CREECH	B.S. 1903	Winston-Salem, N. C.
Associate Manager, J. C. Spach Wagon Works		
HORACE DOWNS CROCKFORD	B.S. 1920	Chapel Hill, N. C.
Teaching Fellow, Department of Chemistry, University of North Carolina		
ALEXANDER DOANE CROMARTIE	B.Agr. 1906	R. 2, Garland, N. C.
Farmer		

Name	*Degree*	*Address*
Richard Oliver Cromwell	M.S. 1916	Not located
William Henry Crow	B.E. 1910	Monroe, N. C.
	Merchant	
Raymond Crowder	B.E. 1915	Raleigh, N. C.
	President, Garage Equipment Company and Crowder Manufacturing Co.	
Russell Alexander Crowell	B.S. 1918	Candler, N. C.
	Farmer	
Charles Lee Cruse	B.S. 1912	Statesville, N. C.
	Veterinarian	
Felix Gray Crutchfield	B.E. 1901	Winston-Salem, N. C.
	607 Spruce St.	
Eugene English Culbreth	B.E. 1903	Raleigh, N. C.
	With Commercial National Bank	
Hugh McCollum Curran	B.S. 1898	Bahia, Brazil
	Forester, Care United States Consul	
Liston Lloyd Dail	B.S. 1913	Ensley, Ala.
	Chemist, Tennessee Coal, Iron, and Railroad Co.	
Dallas Thornton Daily	B.E. 1915	Portsmouth, Va.
	Assistant Engineer, Valuation Department, S. A. L. Railway	
Louis Broaddus Daniel	B.E. 1921	Rosemary, N. C.
	With Patterson Mill Co.	
Walter Lee Darden	B.E. 1903	Norfolk, Va.
	Engineer of Buildings, Seaboard Air Line Railway	
Benjamin Franklin Daughety	B.S. 1921	Kinston, N. C.
	Farmer	
Joseph Frank Davidson	B.E. 1909	Pedro Miguel, C. Z.
	Pacific Locks, Panama Canal	
Samuel Frederick Davidson	B.S. 1914	Fayetteville, N. C.
	North Carolina Department of Agriculture	
Charles Webb Davis	B.E. 1917	Kinston, N. C.
	Office Engineer, State Highway Commission	
Paul Dexter Davis	B.E. 1913	Durham, N. C.
	Assistant Engineer, Wm. M. Piatt, Engineer	
Robert Vernon Davis	B.E. 1916	Montgomery, Ala.
	District Engineer, Southern Bell Telephone and Telegraph Co.	
William Anderson Davis	B.S. 1918	Lucama, N. C.
	Soil Survey, N. C. Department of Agriculture	
William Earle Davis	B.E. 1910	Connelly Springs, N. C.
	Electrician, Connelly Springs Light and Power Co.	
William Hurd Davis	B.E. 1911	Badin, N. C.
	Maintenance Engineer, Electrical Department, Tallassee Power Co.	
William Pressley Davis	B.E. 1917	Weldon, N. C.
	Highway Engineer, Halifax County	
Claud Council Dawson	B.E. 1908	Cramerton, N. C.
	Superintendent, Mays Mills, Inc.	
Thomas Theodore Dawson	B.E. 1910	Durham, N. C.
	Assistant Engineer, City Engineering Department	
Albert George Day	B.E. 1917	Atlanta, Ga.
	Southern Bell Telephone and Telegraph Co.	
Ralph Campbell Deal	B.E. 1912	Clifton Forge, Va.
	With Virginia Western Power Co.	
Robert Antine McColough Deal	B.E. 1921	Raleigh, N. C.
	Draftsman, N. C. State Highway Commission	
William Samuel Dean	B.E. 1909	Roanoke Rapids, N. C.
	Cotton Buyer, Roanoke Mills Company and Rosemary Manufacturing Co.	
Pleasant Leroy Kluttz Deaton	B.E. 1921	Kinston, N. C.
	Good Roads Engineer, with Gilbert C. White	
Leonidas Polk Denmark	B.E. 1915	Raleigh, N. C.
	Grant Clerk, Office of Secretary of State	
Thomas Marvin Denson	B.E. 1919	High Point, N. C.
	With State Highway Commission	
Ernest Cofield Derby	B.E. 1912	Fayetteville, N. C
	Engineer-Builder	

Name	*Degree*	*Address*
LOUIS REINHOLD DETJEN	M.S. 1911	Newark, Del.
Associate Professor of Horticulture. Acting Horticulturist University of Delaware		
MOSES MOORE DEW	B.S. 1920	Columbus, Ohio
Senior in the Veterinary College, Ohio State University		
EDWIN SEXTON DEWAR	B.S. 1911	Raleigh, N. C.
Assistant Chemist, North Carolina Department of Agriculture		
JOSEPH CHARLES DEY	B.E. 1906	Not located
JUNIUS FRANKLIN DIGGS	B.S. 1903	Rockingham, N. C.
Planter and Merchant		
HUGH WOODY DIXON	B.S. 1919	Brooklyn, N. Y.
Art Student, Pratt Institute		
WILLIAM SERGEANT DIXON, JR.	B.E. 1918	Mebane, N. C.
With Elkins Motor Car Co.		
LEROY DOCK	B.S. 1920	Biloxi, Miss.
1412 West Beach		
WILLIAM CARTER DODSON	B.E. 1917	Charlotte, N. C.
Sales Engineer, H. G. Mayer Textile Machinery		
MINOR CECIL DONNELL	B.S. 1917	R. 4, Greensboro, N. C.
Farmer		
ARCHIE JAY DOOLITTLE	B.E. 1914	Passaic, N. J.
Engineer, Portable Machinery Co., Inc.		
CARLTON O'NEAL DOUGHERTY	B.E. 1909	North, S. C.
Farmer, and Appraiser for the Federal Land Bank of Cola, S. C.		
MCNEELY DUBOSE	B.E. 1912	Badin, N. C.
E.E. 1920. Assistant Electrical Superintendent, Tallassee Power Co.		
FREDERICK EMMETT DUCEY	B.S. 1918	Not located
FRED ATHA DUKE	B.E. 1909	Portsmouth, Va.
With Duke & Smith, Contractors and Engineers		
ROBERT HOBSON DUKE	B.E. 1920	Johnsonburg, Pa.
With Rolfe Tannery of Kistler Leather Co.		
ALVAH DUNHAM	B.S. 1919	Raleigh, N. C.
Graduate Student, N. C. State College		
JAMES LEONIDAS DUNN	B.E. 1910	Scotland Neck, N. C.
Salesman, E. I. Du Pont de Nemours & Co.		
ALVIN DEANS DUPREE	B.E. 1908	Miami, Fla.
Vice President, Jno. W. Claussen, Inc.		
RAYMOND ROWE EAGLE	B.E. 1908	New Bern, N. C.
Civil Engineer and Contractor		
WALTER CONNOR EAGLES	B.S. 1921	Not located
MINNIC LUTHER EARGLE	B.Agr. 1908	R. 7, Charlotte, N. C.
Farmer		
JOHN IVEY EASON	B.S. 1911	R. 1, Snow Hill, N. C.
Farmer		
WILLIAM HUNT EATON	B.S. 1909	Auburn, Ala.
Associate Professor of Dairying, Alabama Polytechnic Institute		
LATTA VANDERION EDWARDS	B.E. 1906	Winston-Salem, N. C.
C.E. 1911, Cornell University. Consulting Engineer		
CHARLES PATTERSON ELDRIDGE	B.E. 1915	Raleigh, N. C.
Vice President, North State Construction Co.		
SEBA ELDRIDGE	B.E. 1907	Lawrence, Kansas
Associate Professor of Sociology, University of Kansas		
TIMOTHY ELDRIDGE	B.E. 1904	Mount Olive, N. C.
Superintendent, Electric Light Plant		
WILLIAM KING ELDRIDGE	B.E. 1915	Roanoke, Va.
Motive Power Department, Norfolk and Western Railway Co.		
THOMAS BENJAMIN ELLIOTT	B.S. 1918	Shelby, N. C.
Teacher Vocational Agriculture, Shelby High School		
WILLIAM HENRY ELLIOTT	B.S. 1917	R. 3, Fayetteville, N. C.
Farmer		
THEOPHILUS THOMAS ELLIS	B.E. 1903	R. 4, Henderson, N. C.
Farmer		

Name	*Degree*	*Address*
WELDON THOMPSON ELLIS	B.E. 1906	Blacksburg, Va.
M.E. 1908. Professor of Power Engineering and Machine Design. Superintendent Power Plant, Virginia Polytechnic Institute		
LEE BORDEN ENNETT	B.S. 1895	Silverdale, N. C.
Stock Farmer		
ROBERT CRAIG ERNST	B.S. 1921	Minneapolis, Minn.
Graduate Student, School of Chemistry, University of Minnesota		
ALBERT EDWARD ESCOTT	B.E. 1906	Charlotte, N. C.
Editor and Manager of Cotton Mill News		
RANDAL BENNET ETHERIDGE	B.S. 1920	Raleigh, N. C.
Instructor, Soils Department, N. C. State College		
WILLIAM CARLYLE ETHERIDGE	B.Agr. 1906	Columbia, Mo.
M.S. 1908. Ph.D. Cornell, 1915. Professor of Field Crops, University of Missouri		
EARL MONTIER EVANS	B.E. 1913	Alcoa, Tenn.
Assistant Master Mechanic, Aluminum Company of America		
JOSEPH GRAHAM EVANS	B.E. 1921	Raleigh, N. C.
Instructor, Mathematics Department, N. C. State College		
BENJAMIN BRYAN EVERETT	B.Agr. 1907	Palmyra, N. C.
M.S. 1912, University of Wisconsin. Farmer		
JAMES BECKETT EWART	B.S. 1909	Not located
RALPH RINGGOLD FAISON	B.S. 1909	Greensboro, N. C.
908 Magnolia St.		
WILLIAM ALEXANDER FAISON	B.E. 1909	Chester, Pa.
President, Atlantic Steel Castings Co.		
ARCHIE ARRINGTON FARMER	B.E. 1914	Schofield Barracks, Hawaii
Captain Signal Corps, U. S. Army, Commanding 11th Hawaiian Division		
ISAAC HERBERT FARMER	B.E. 1908	Virginia Beach, Va.
JAMES WILLIAM FARRIOR	B.E. 1904	Warsaw, N. C.
Physician		
JOHN ALEXANDER FARRIOR	B.S. 1916	R. 4, Raleigh, N. C.
Farmer		
WILLIAM DOLLISON FAUCETTE	B.E. 1901	Norfolk, Va.
C.E. 1910. Chief Engineer, Seaboard Air Line Railroad Co.		
ISAAC HENRY FAUST	B.E. 1895	Burlington, N. C.
With Hedrick Construction Co.		
JOHN BARTLETT FEARING, JR.	B.S. 1914	Elizabeth City, N. C.
ALEXANDER LITTLEJOHN FEILD	M.S. 1914	New York, N. Y.
Research Physical Chemist, Union Carbide and Carbon Corporation		
BENJAMIN CAREY FENNELL	B.S. 1898	Milwaukee, Wis.
M.E. 1900. With Nordberg Manufacturing Co.		
JAMES LUMSDEN FEREBEE	B.S. 1902	Milwaukee, Wis.
Principal Assistant Engineer, Milwaukee Sewerage Commission		
PERCY BELL FEREBEE	B.E. 1913	Andrews, N. C.
President, Tri-County Publishing Company, Ferebee & Co., Ferebee & Young Co.		
BENJAMIN TROY FERGUSON	B.Agr. 1908	Wilson, N. C.
County Farm Demonstration Agent		
JOHN LINDSAY FERGUSON	B.E. 1907	Pedro Miguel, C. Z.
Electrician, Panama Canal, U. S.		
KARL MCATEE FETZER	B.E. 1914	New York, N. Y.
Western Electric Company, Department 210K		
WALTER GOSS FINCH	B.E. 1905	Baltimore, Md.
Civil Engineer, U. S. Engineer Office, 309 Custom House		
WILLIAM WALTER FINLEY	B.Agr. 1904	R. 1, Charlottesville, Va.
Proprietor, Win Wilkes Farm		
PAUL BRANDON FLEMING	B.E. 1918	Cleveland, Ohio
With Phegley & Szekely, Consulting Engineers		
LANDON CABELL FLOURNOY	B.E. 1918	Birmingham, Ala.
Distribution Engineer, Alabama Power Co.		
DEWEY AUGUSTUS FLOYD	B.E. 1921	Schenectady, N. Y.
Student Engineer, General Electric Co.		
DANIEL BURNIE FLOYD	B.E. 1913	Camp Knox, Ky.
Field Lieutenant, Field Artillery, United States Army		

Name	*Degree*	*Address*
EDWARD YORK FLOYD	B.S. 1920	R. 1, Hester, N. C.
	Farmer	
FRANK FULLER FLOYD	B.E. 1893	Knoxville, Tenn.
	Vice President and Sales Manager, Jellico Coal Mining Co.	
AARON CONARD FLUCK	B.E. 1915	Rancagua, Chile, S. A.
	Office Engineer, With The Braden Copper Co.	
FRANK LINDSAY FOARD	B.S. 1909	R. 7, Salisbury, N. C.
	Farmer	
JAMES FONTAINE	B.E. 1914	R. 2, Woodsdale, N. C.
MATTHEW MAURY FONTAINE	B.E. 1916	R. 2, Woodsdale, N. C.
	Lumber Dealer	
RUFUS EUGENE FORBIS	B.E. 1910	Charlotte, N. C.
	M.E. 1913. Mechanical Engineer, Chemical Construction Co.	
ARTHUR CRAWFORD FOSTER	B.S. 1917	Sanford, Fla.
	With Cotton and Truck Experiment Station	
SHIRLEY WATSON FOSTER	B.Agr. 1906	San Francisco, Cal.
	Entomologist and Manager Insecticide Department, General Chemical Co.	
WILLIAM BENJAMIN FOSTER	B.E. 1915	Raleigh, N. C.
GEORGE WASHINGTON FOUSHEE	B.E. 1904	Greensboro, N. C.
	Secretary and Treasurer, Dicks Laundry Co.	
ELIAS VAN BUREN FOWLER	B.E. 1907	R. 1, Horseshoe, N. C.
	Farmer	
ROSCOE LOOMIS FOX	B.E. 1909	Charlotte, N. C.
	In Charge of Office, Pound & Moore	
JAMES ROSCOE FRANCK	B.S. 1914	Richlands, N. C.
	Farmer	
GEORGE STRONACH FRAPS	B.S. 1896	College Station, Texas
	Ph.D., Johns Hopkins University. State Chemist of Texas. Chemist, Texas Experiment Station. Chemist, Texas Feed Control	
DANIEL ROBERT STEELE FRAZIER	B.E. 1918	Monroe, N. C.
	Road Contracting	
JOHN ALEXANDER FRAZIER	B.E. 1916	R. 1, King's Creek, N. C.
ELMO VERNON FREEMAN	B.E. 1911	Middlesboro, Ky.
	Salesman, Westinghouse Electric and Manufacturing Co.	
EDWIN WOOD FULLER	B.E. 1919	Raeford, N. C.
PERCY LEIGH GAINEY	B.Agr. 1908	Manhattan, Kansas
	M.S. 1910. Associate Professor Bacteriology, Kansas State Agricultural College	
EDGAR WILLIAM GAITHER	B.S. 1904	Goldsboro, N. C.
	District Farm Demonstration Agent, Eastern District	
JAMES JERVEY GANTT	B.E. 1910	St. Augustine, Fla.
	Assistant Engineer, Florida East Coast Railway Co.	
FREDERICK CARLTON GARDNER	B.E. 1917	Lansford, Pa.
	Assistant Resident Engineer, Phoenix Utility Company, Care Old Company Club	
JUNIUS TALMAGE GARDNER	B.E. 1908	Shelby, N. C.
	With U. S. Postoffice, Shelby, N. C.	
OLIVER MAX GARDNER	B.S. 1903	Shelby, N. C.
	Lawyer	
ZEBULON CLIFTON GARDNER	B.S. 1916	Washington, D. C.
	Government Employee	
CLEMENT LEINSTER GARNER	B.E. 1907	Washington, D. C.
	Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey	
EARLY BAXTER GARRETT	B.S. 1918	Greensboro, N. C.
	County Agricultural Demonstration Agent	
PERRY HAMILTON GASTON	B.S. 1921	Hiddenite, N. C.
	Teacher of Agriculture	
BARTHOLOMEW MOORE GATLING, JR.	B.E. 1921	Columbia, S. C.
	With Southern Bell Telephone and Telegraph Co.	
JOHN GATLING	B.E. 1921	Lenoir, N. C.
	Inspector, State Highway Commission	
LEWIS PRICE GATTIS	B.E. 1909	Greenville, S. C.
	Manager, Carolina Portland Cement Co.	

Name	*Degree*	*Address*
JOHN GEORGE HARVEY GEITNER, JR.	B.E. 1914	Hickory, N. C.
With A. A. Shuford Cotton Mills		
EDWARD MOORE GIBBON	B.E. 1893	South Jacksonville, Fla.
City Engineer		
NICHOLAS LOUIS GIBBON	B.S. 1897	Washington, D. C.
Special Agent, Division of Manufactures, Department of Commerce		
SETH MANN GIBBS	B.E. 1908	Wilmington, N. C.
Resident Engineer, N. C. State Highway Commission		
THOMAS FENNER GIBSON	B.E. 1912	Philadelphia, Pa.
Consulting Engineer, 908 Franklin Trust Building		
LAMAR CARSON GIDNEY	B.E. 1903	Shelby, N. C.
Engineering Department, Southeastern Underwriters Association		
RICHARD F. GIERSCH, JR.	B.E. 1912	Lawndale, N. C.
E.E. 1921. Electrical Engineer		
LOVIC RODGERS GILBERT	B.E. 1907	Raleigh, N. C.
T.E. 1915. Superintendent, Caraleigh Mills Co.		
PETER MELVIN GILCHRIST	B.S. 1915	Laurinburg, N. C.
Farmer		
RALPH ALLISON GILL	B.E. 1914	El Paso, Texas
Assistant to Superintendent of Railways, El Paso Electric Railway Co.		
GEORGE WILLIAM GILLETTE	B.E. 1911	Camp A. A., Humphreys, Va.
Captain, Corps of Engineers, U. S. Army		
MAURICE MORDECAI GLASSER	B.E. 1908	Charleston, S. C.
Standard Electric Co.		
BENJAMIN DUKE GLENN	B.E. 1918	Philadelphia, Pa.
Representative, Erwin Yarn Agency, Inc.		
CHARLES WILLIS GOLD	B.S. 1895	Greensboro, N. C.
Treasurer, Jefferson Standard Life Insurance Co.		
M. HENRY GOLD	B.E. 1908	Waldo, Fla.
Trainmaster, Seaboard Air Line Railway		
ROY DURANT GOODMAN	B.S. 1913	R. 2, Concord, N. C.
County Farm Demonstration Agent		
AMZI NEALY GOODSON	B.E. 1916	Salisbury, N. C.
Signal and Electrical Department, Southern Railway		
HOWARD HENLEY GORDON	B.S. 1919	Chula, Va.
Manager, Glenmore Stock Farm		
CICERO FRED GORE	B.E. 1913	Weldon, N. C.
Superintendent and Engineer of Highways, Halifax County		
ALBERT SIDNEY GOSS	B.E. 1909	Albany, Ga.
Chief Engineer, Georgia-Alabama Power Co.		
JOHN DAVID GRADY	B.Agr. 1908	Great Falls, S. C.
Farmer and Trader		
ROBERT WALTER GRAEBER	B.S. 1911	Statesville, N. C.
County Agricultural Demonstration Agent		
WILLIAM HAYWOOD GRAHAM, JR.	B.E. 1912	Atlanta, Ga.
Assistant Traffic Engineer, Southern Bell Telephone and Telegraph Co.		
ROBERT STRICKLER GRAVES	B.E. 1907	Chagrin Falls, Ohio
President and General Manager, Chagrin Valley Electric Co.		
CHARLES POOL GRAY	B.E. 1909	Buxton, N. C.
Merchant		
FRANK TEMPLE GRAY	B.E. 1915	Charlotte, N. C.
Toll Engineer, Southern Bell Telephone and Telegraph Co.		
GEORGE PENDER GRAY	B.S. 1893	Not located
JAMES MILLER GRAY	B.S. 1910	Raleigh, N. C.
Assistant Director, Agricultural Extension Service		
STERLING GRAYDON	B.E. 1905	Charlotte, N. C.
Treasurer, Aileen Mills, Inc.		
ANDREW HARTSFIELD GREEN	B.S. 1909	Raleigh, N. C.
Fire Insurance Adjuster, Southern Adjustment Bureau		
MARION JACKSON GREENE	B.S. 1896	Charlotte, N. C.
308 Central Avenue		
GEORGE MAXWELL GREENFIELD	B.S. 1920	Charleston, S. C.
With Standard Oil Company, of New Jersey		

Name	*Degree*	*Address*
KENNETH LEE GREENFIELD	B.S. 1916	Whitmell, Va
Agricultural Instructor, Whitmell Farm Life School		
ARTHUR WYNNS GREGORY	B.S. 1906	Halifax, N. C
Farmer and Merchant		
JOHN LEROY GREGSON, JR.	B.E. 1917	Charlotte, N. C
Engineer, State Highway Commission		
PAUL STIREWALT GRIERSON	B.E. 1904	New York, N. Y
Chief Engineer, Charles Cory & Son, Inc.		
WILLIAM HENRY GRIFFIN	B.E. 1914	Goldsboro, N. C
Member of firm, W. H. Griffin & Son, Coal and Wood Dealers		
LEV CHARLES GUIRKIN	B.E. 1921	Columbia, S. C
With Southern Bell Telephone and Telegraph Co.		
JOSEPH PERRIN GULLEY	B.E. 1904	Norfolk, Va
Traveling Salesman, Woodhouse Electric Co.		
RICHARD NESTUS GURLEY	B.E. 1920	Shelby, N. C
WINSTON PAYNE GWATHMEY	B.E. 1913	Richmond, Va
Assistant Engineer, C. and O. Railway		
JAMES HOLMES HADDOK	B.E. 1915	Durham, N. C
Efficiency Department, Erwin Cotton Mills Co.		
DORSEY YATES HAGAN	B.E. 1908	Greensboro, N. C
Real Estate		
FRANK JOSHUA HAIGHT	B.E. 1917	Washington, D. C
With U. S. Coast and Geodetic Survey		
FELIX STANTON HALES	B.E. 1913	Cleveland, Ohi
C. E., Cornell University, 1916. Assistant Engineer, N. Y. C. and St. L. Ry.		
CHARLES GANZER HALL	B.E. 1913	Providence, R. I
General Superintendent, Tauton Manufacturing Co.		
DENNIS HENRY HALL, JR.	B.S. 1919	Raleigh, N. C
M.S. 1921. Instructor in Poultry Science, N. C. State College		
JOHN GREENE HALL, JR.	B.E. 1920	Auburn, N. C
With State Highway Commission		
JOHN HUBBARD HALL, JR.	B.S. 1915	Gatesville, N. C
Lawyer		
HORACE LESTER HAMILTON	B.E. 1906	Philadelphia, Pa
With N. W. Ayer & Son, Advertising Agents		
LAURENS ADAMS HAMILTON	B.S. 1921	Erlanger, N. C
Dairy Manager, Erlanger Cotton Mills Co.		
ROBERT WILLIAMS HAMILTON, JR.	B.S. 1916	R. 1, Pacolet, S. C
Farmer		
WILLIAM ROY HAMPTON	B.S. 1909	Plymouth, N. C
Owner, Firm of W. H. Hampton & Son, Inc., Merchants and Bankers		
THOMAS WHEELER HANCOCK, JR.	B.S. 1920	Jacksonville, N. C
Farmer		
LEROY CORBETT HAND	B.E. 1913	Chadbourn, N. C
Merchant		
JOHN ISAAC HANDLEY	B.S. 1904	Atlanta, Ga
M.S. 1916. President and General Manager, Southeastern Laboratories, Inc.		
JOHN FREDERICK HANSELMAN	B.E. 1906	Emporia, Va
JOHN WILLIAM HARDEN, JR.	B.S. 1921	Raleigh, N. C
PHILIP WILLIAM HARDIE	B.E. 1907	Fort Sherman, C. Z
Captain, Coast Artillery Corps, U. S. Army		
JARVIS BENJAMIN HARDING	B.E. 1904	Greenville, N. C
C.E. 1909. Engineer, Pitt County Highway Commission		
ROBERT MCKENZIE HARDISON	B.E. 1912	Boston, Mass
B. Arch., Columbia University, 1915. District Engineer, Corrugated Bar Co.		
NATHAN DAVID HARGROVE	B.S. 1912	Richmond, Va
With The Imperial Tobacco Co., Ltd.		
RICHARD HUGH HARPER	B.S. 1905	Charlotte, N. C
With Ford Motor Co.		
GEORGE ROLAND HARRELL	B.S. 1900	Grasselli, N. J
With Grasselli Chemical Company as Division Head in Manufacturing Department		
JOHN WILLIAM HARRELSON	B.E. 1909	Raleigh, N. C
M.E. 1915. Professor of Mathematics, N. C. State College		

Name	*Degree*	*Address*
ADAM HUGH HARRIS	B.S. 1920	Smithfield, N. C.
Salesman, Sanders Motor Co.		
CARL RUSH HARRIS	B.E. 1917	Lancaster, S. C.
With Lancaster Cotton Mills		
EBERN DODD HARRIS	B.S. 1897	Louisville, Ky.
Partner, Garrett and Harris, Insurance Agency		
GORDON HARRIS	B.E. 1909	New York City
E.E. 1914. Electrical Engineer, Murrie & Co., 74 Broadway, Engineers		
JOHN FLEMING HARRIS	B.E. 1917	High Point, N. C.
Box 221		
RUSSELL PEYTON HARRIS	B.S. 1915	Chapel Hill, N. C.
Teacher Vocational Agriculture, Chapel Hill Public School		
THOMAS DEVIN HARRIS	B.E. 1911	Albemarle, N. C.
Highway Engineer		
WILLIAM HENRY HARRISS	B.E. 1895	New York, N. Y.
M.E. 1896. Vice President, Liberty Textile Corporation		
ABRAM EDGAR HARSHAW	B.E. 1918	Newport News, Va.
Instructor in Mechanical Drawing, Apprentice School, Newport News Shipbuilding and Dry Dock Co.		
HENRY MERCER HARSHAW	B.E. 1915	Atlanta, Ga.
President, South Atlantic Auto Sales Co.		
THOMAS ROY HART	B.E. 1913	Raleigh, N. C.
T.E. 1920. Instructor in Textile Engineering, N. C. State College		
ADOLPH THEODORE HARTMANN	B.E. 1917	Charlotte, N. C.
Contractor		
FRED BRYAN HARTON	B.S. 1920	Hendersonville, N. C.
Teacher of Vocational Agriculture		
HARRY HARTSELL	B.E. 1912	Raleigh, N. C.
Professor of Physical Education, N. C. State College		
JOHN HARVEY, JR.	B.E. 1914	West Philadelphia, Pa.
M.D. University Hospital, Philadelphia, Pa.		
JAMES SHOFFNER HATHCOCK	B.S. 1919	R. 2, Wilson, N. C.
Teacher of Science, Rock Ridge High School		
JOHN RUBY HAUSER	B.E. 1918	Cincinnati, Ohio
Industrial Sales Department, Westinghouse Electric and Manufacturing Co.		
FRANK HAWKS	B.E. 1910	Newport News, Va.
Box 713		
CLAUDE JACQUES HAYDEN	M.S. 1916	Clemson College, S. C.
Associate Professor Horticulture, Clemson Agricultural College		
HENRY WADSWORTH HAYWARD	B.E. 1917	Toledo, Ohio
Industrial Fuel Engineer, Combustion Utilities Corporation of New York		
EDMUND BURKE HAYWOOD	B.E. 1910	Raleigh, N. C.
WILLIAM STEPHEN HAYWOOD	B.E. 1916	Newport News, Va.
With Engine Estimating Division, Newport News Shipbuilding and Dry Dock Co.		
OKTAN LAFAYETTE HEMPHILL	B.E. 1907	Hoboken, N. J.
President, J. L. Hemphill & Co., Inc.		
HARRY BENJAMIN HENDERLITE	B.E. 1915	Raleigh, N. C.
Assistant to State Highway Engineer, N. C. State Highway Commission		
LEONARD HENDERSON	B.E. 1909	Greensboro, N. C.
With State Highway Commission		
MAURICE HENDRICK	B.E. 1908	Cliffside, N. C.
General Superintendent, Cliffside and Haynes Mills		
JOHN WADE HENDRICKS	B.S. 1917	Newton, N. C.
County Agricultural Demonstration Agent		
ESSE MEACHEM HENLEY	B.S. 1920	Jamestown, N. C.
Agricultural Teacher, Jamestown High School		
LEONARD ORR HENRY	B.E. 1916	Charlotte, N. C.
Junior Engineer, Southern Bell Telephone and Telegraph Co.		
HARRY LEE HERMAN	B.S. 1920	Conover, N. C.
Farmer		
VERNON RAY HERMAN	B.S. 1915	Tarboro, N. C.
M.S. 1920. Plant Breeder and General Manager, Edgecombe Seed Breeders' Assn.		
LAWRENCE JAMES HERRING	B.Agr. 1907	Wilson, N. C.
D.V.S., Kansas City Veterinary College. Veterinarian		

Name	*Degree*	*Address*
JERE ISAAC HERRITAGE	B.E. 1905	Norfolk, Va.
Civil Engineer, Land and Industrial Department, Norfolk-Southern Railway Co.		
EDGAR ALLEN HESTER	B.E. 1916	Brooklyn, N. Y.
E.E. 1921. Assistant Electrical Engineer, Brooklyn Edison Co., Inc.		
THOMAS JASPER HEWITT	B.E. 1913	Wilmington, N. C.
Junior Engineer, U. S. Engineer Office		
CLARENCE WILSON HEWLETT	B.E. 1906	Iowa City, Iowa
Assistant Professor Physics, State University of Iowa		
JOHN GRAY HICKS	B.S. 1919	Wilmington, N. C.
Life Insurance Business		
RUFUS WILLIAM HICKS, JR.	B.E. 1910	Wilmington, N. C.
M.E. 1915. Managing Director, Sanitary Equipment Construction Co.		
BASCOMBE BRITT HIGGINS	B.S. 1909	Experiment, Ga.
M.S. 1910; Ph.D. 1913. Botanist, Georgia Agricultural Experiment Station		
LYDA ALEXANDER HIGGINS	B.S. 1910	Starkville, Miss.
Dairy Husbandman, Extension Department, Mississippi Agricultural College		
RILEY WEAVER HIGGINS	B.S. 1913	R. 4, Asheville, N. C.
Farm and Dairy Manager, for J. M. Shook		
JAMES ALLAN HIGGS, JR.	B.E. 1906	Atlanta, Ga.
C.E. 1910. Resident Manager, Southeastern District, Massey Concrete Products Corporation, 1007 Candler Building		
JERE EUSTIS HIGHSMITH	B.S. 1897	Parkersburg, N. C.
Farmer		
DANIEL HARVEY HILL, JR.	B.S. 1909	Charlotte, N. C.
Treasurer, Hill, Clark & Co. Associate Editor, Southern Textile Bulletin		
DAVID RAYMOND HINKLE	B.E. 1911	Kinston, N. C.
Superintendent, Kinston Cotton Mill		
ROBERT CLIFF HINKLE	B.E. 1921	Cliffside, N. C.
Section Hand, Spinning Room, Cliffside Cotton Mills		
GUY FRANCIS HINSHAW	B.E. 1907	Winston-Salem, N. C.
C.E. 1915. Hinshaw & Ziglar, Civil Engineers		
EDWARD GIBBON HOBBS	B.S. 1920	Greensboro, N. C.
Cotton Business		
BRUCE DUNSTON HODGES	B.E. 1917	Kinston, N. C
Partner, Gents Furnishing Store, Moseley-Hodges Co.		
GEORGE HERBERT HODGES	B.E. 1904	Uniontown, Pa
Superintendent of Continental No. 2 Mine, H. C. Frick Coke Co.		
RALPH HINTON HODGES	B.S. 1916	Washington, N. C
With Thompson & Hodges, Seed and Feed, Wholesale and Retail		
WILBUR BREEDEN HODGES	B.S. 1920	Bennettsville, S. C
EDGAR ALLAN HODSON	M.S. 1914	Little Rock, Ark
B.S. Alabama Polytechnic Institute, 1911. Agent in Cotton Marketing Demonstrations, Agr. Extension Division, University of Arkansas		
LABAN MILES HOFFMAN, JR.	B.E. 1905	Dallas, N. C
Cashier, Bank of Dallas		
WILLIS ASKEW HOLDING	B.S. 1912	Raleigh, N. C
Member of firm, King & Holding, Men's Clothing		
CHARLES BOLLING HOLLADAY	B.E. 1893	Wilmington, Del
Retired		
ROY ARTHUR HOLLOWELL	B.S. 1921	Aulander, N. C
Farmer		
EDISON PARKER HOLMES	B.E. 1917	Greensboro, N. C
Agent, Philadelphia Storage Battery Co.		
OLIVER KNIGHT HOLMES	B.S. 1921	R. 2, Fayetteville, N. C
Farmer		
THOMAS HALL HOLMES, JR.	B.E. 1916	Goldsboro, N. C
Manager, Wayne Red Brick Co.		
RAY AUGUSTUS HOLSHOUSER	B.E. 1920	Not locate
DEAN RONEY HOLT	B.E. 1916	Milwaukee, Wi
Hydraulic Department, Allis-Chalmers Manufacturing Co.		
PETER ARMSTRONG HOLT	B.S. 1913	Graham, N. C
L. Banks Holt Manufacturing Co.		

Name	*Degree*	*Address*
William Norman Holt	B.E. 1907	Smithfield, N. C.
Member of firm of Holt Oil Co.		
Edward Holland Holton	B.S. 1917	Winston-Salem, N. C.
With R. J. Reynolds Tobacco Co.		
Solomon Linn Homewood	B.S. 1920	Raleigh, N. C.
Instructor and Freshman Athletic Coach, N. C. State College		
Benjamin Oliver Hood	B.E. 1901	Port Newark, N. J.
C.E. 1919. Designer, Submarine Boat Corporation		
Harry Eley Hood	B.E. 1920	Schoolfield, Va.
Industrial Chemist, Riverside and Dan River Cotton Mills		
Louie Lee Hood	B.E. 1910	Asheville, N. C.
Hood Music Co.		
David Lee Hooper	B.E. 1915	Edgewood, Md.
Captain, Chemical Warfare Service, Edgewood Arsenal		
Robert Mullen Hooper	B.E. 1917	Atlánta, Ga.
With Engineering Department, Southern Bell Telephone and Telegraph Co.		
William Ransom Hoots	B.S. 1917	East Flat Rock, N. C.
Carolina Nursery Co.		
Herndon Hopkins	B.S. 1915	Staley, N. C.
Farmer		
Walter Cleary Hopkins	B.E. 1913	Baltimore, Md.
Engineer of Bridges, Maryland State Roads Commission		
Wayne Arrington Hornaday	B.S. 1909	Greensboro, N. C.
M.S. 1910. D.V.M., Kansas City Veterinary College. Veterinarian, City Milk and Meat Inspector		
Frank William Howard	B.E. 1917	Bridgeport, Conn.
With Connecticut State Highway Department, New Milford Division		
Jesse McRae Howard	B.E. 1904	Charlotte, N. C.
Technical Demonstrator, Dyestuffs Sales Department, Charlotte Office, E. I. DuPont de Nemours Co.		
John Howard	B.S. 1896	Middlesboro, Ky.
Attorney at Law		
John Stewart Howard	B.S. 1915	Salemburg, N. C.
Teacher of Agriculture, Salemburg High School		
Paul Noble Howard	B.E. 1916	Charlotte, N. C.
Vice President, Blythe Bros. Co., Engineers and Contractors		
Samuel Benjamin Howard	B.E. 1913	Newton, N. C.
Engineer, Catawba County		
Ralph Wilikinson Howell	B.S. 1912	Terra Ceia, N. C.
Manager, The Nissen Farms		
Jesse Francis Huette	B.E. 1914	Newport News, Va.
Newport News Shipbuilding and Dry Dock Co.		
Branton Faison Huggins	B.E. 1904	Griffin, Ga.
Contractor and Engineer		
Henry Allen Huggins	B.S. 1900	Wilmington, N. C.
Member of firm of Geo. W. Huggins Co., Jewelers		
Christopher Miller Hughes	B.E. 1895	Richmond, Va.
B.S. 1899. Wholesale Lumber Dealer		
William Frank Humbert, Jr.	B.E. 1920	Spray, N. C.
Assistant to Resident Engineer, The Carolina Cotton and Woolen Mills Co.		
Arthur Lee Humphrey	B.E. 1919	Wilmington, N. C.
With Engineering Department, Tidewater Power Co.		
Lloyd Rainey Hunt	B.E. 1905	Lexington, N. C.
With Electrical Engineering Department, Dacotah Cotton Mills and Nokomis Cotton Mills		
Hill McIver Hunter	B.E. 1904	Greensboro, N. C.
General Purchasing Agent, Revolution Mills, Asheville Mills, Minneola Mills, Cliffside Mills, White Oak Mills, Proximity Print Works, Proximity Mills, Haynes Mills, Salisbury Cotton Mills, Eno Cotton Mills, Dacotah Cotton Mills		
John Blake Hunter	B.E. 1920	Greensboro, N. C.
With U-Save-It Stores		
Malcolm Beall Hunter	B.E. 1895	Charlotte, N. C.
President, Acme Plumbing and Heating Co.		

Name	*Degree*	*Address*
William Tisdale Hurtt	B.E. 1914	Wilkinsburg, Pa.
Sales Engineer Ackernite Corporation of Pittsburgh, Pa.		
Frank Porter Huskin	B.E. 1921	Atlanta, Ga.
Student Engineer, American Telephone and Telegraph Co.		
Christopher Thomas Hutchins	B.E. 1920	Louisville, Ky.
Student at the Southern Baptist Theological Seminary		
John Eli Ivey	B.S. 1917	Raleigh, N. C.
Assistant Poultry Investigator and Pathologist, N. C. Experiment Station		
John William Ivey	B.E. 1909	Seven Springs, N. C.
Farmer		
John Jacob Jackson	B.E. 1918	R. 4, Kinston, N. C.
Farmer		
Shober Korner Jackson	B.S. 1918	Raleigh, N. C.
With N. C. Agricultural Experiment Station		
William Colbert Jackson	B.S. 1896	Wake Forest, N. C.
Farmer		
Murray Gibson James	B.S. 1918	Wilson, N. C.
301 West Nash St.		
George Linwood Jeffers	B.E. 1915	Gloversville, N. Y.
Commercial Agent, Fulton County Gas and Electric Co.		
Ernest Judson Jeffress	B.E. 1913	Goldsboro, N. C.
Manager and Secretary, Goldsboro Ice Co.		
Douglas Creelman Jeffrey	B.E. 1913	Akron, N. Y.
Mine Superintendent, American Gypsum Co.		
John LeBon Jenkins	B.E. 1916	Not located
Arthur Spruill Jennette	B.E. 1921	Raleigh, N. C.
Draftsman, State Highway Commission		
Sidney Earl Jennette	B.E. 1916	Oxford, N. C.
With State Highway Commission		
Eugene Carl Jernigan	B.S. 1920	Benson, N. C.
Teacher of Vocational Education		
Fred Duncan Jerome	B.E. 1919	Goldsboro, N. C.
Resident Engineer, N. C. State Highway Commission		
William Leon Jewell	B.E. 1914	Sanford, N. C.
Civil Engineer, Joel W. Stout Co.		
Lacy John	B.S. 1914	Lumber Bridge, N. C.
Farmer		
Eugene Colistus Johnson	B.E. 1903	Ingold, N. C.
Farmer		
James Wright Johnson	B.E. 1913	Garland, N. C.
Judson Peele Johnson	B.E. 1921	Raleigh, N. C.
With Raleigh Baseball Club		
Leander Brownlow Johnson	B.S. 1916	R. 5, Hendersonville, N. C.
Farmer		
Paul Worthy Johnson	B.S. 1917	Raeford, N. C.
General Manager, P. W. Johnson & Co.		
William Fladger R. Johnson	B.E. 1909	Marion, S. C.
Retail Furniture and Real Estate		
Walter Myatt Johnson	B.E. 1917	Chalybeate Springs, N. C.
Victor Allison Johnston	B.S. 1916	Mooresville, N. C.
M.S. 1917. With Cooperative Creamery Co.		
William Daniel Johnston	B.E. 1919	Cincinnati, Ohio
Engineering Department, The Procter & Gamble Co.		
William Morton Johnston	B.S. 1921	Raleigh, N. C.
Seedman, Job P. Wyatt & Sons Co.		
Willis Neal Johnston	B.E. 1914	Mooresville, N. C.
Hardware and Automobile Dealer		
Albert Carl Jones	B.Agr. 1907	High Point, N. C.
D.V.S., Kansas City Veterinary College. Veterinarian, Meat and Milk Inspector		
Asbury Crouse Jones	B.S. 1921	Ames, Iowa
Student in Animal Husbandry, Iowa State College		
Frederick John Jones	B.E. 1909	Richmond, Va.
Assistant Engineer, Valuation Committee, Chesapeake and Ohio Railway		

Name	*Degree*	*Address*
GARLAND JONES	B.S. 1900	Not located
JOHN KEITH JONES	B.E. 1921	Columbia, S. C.
Southern Bell Telephone and Telegraph Co.		
OMRA BURR JONES	B.S. 1920	China Grove, N. C.
Superintendent, Rowan County Farm Life School		
ROBERT FRANK JONES	B.E. 1910	Summerville, S. C.
WILLIAM COOKE JONES	B.E. 1918	Newport News, Va.
Instructor in Mathematics, Newport News Shipbuilding and Dry Dock Company Apprentice School		
WILLIAM HUGH JONES	B.S. 1921	Cofield, N. C.
Farmer		
WILLIAM MANLEY JONES	B.E. 1914	Charlotte, N. C.
Salesman, Aluminum Cooking Utensil Co.		
WILLIAM WHITMORE JONES	B.E. 1907	Oak Park, Ill.
Telephone Engineer, Western Electric Co.		
CLYDE RAYMOND JORDAN	B.E. 1910	Elizabethtown, N. C.
Vice President, Bladen Auto Co.		
LESLIE LAFAYETTE JORDAN	B.E. 1921	Washington, D. C.
Lieutenant Commander, United States Navy		
HARVEY LANGILL JOSLYN	B.S. 1913	Vanceboro, N. C.
M.S. 1916. Superintendent, Craven County Farm Life School		
SIR KEITH KELLER	B.E. 1914	St. Louis, Mo.
Engineer of Construction, Missouri, Kansas and Texas Lines		
JOHN GORDON KELLOGG	B.S. 1912	Not located
MARTIN KELLOG	B.Agr. 1901	Sunbury, N. C.
Farmer		
REX LIVINGSTON KELLY	B.E. 1916	Sanford, N. C.
Bookkeeper, Page Co.		
CLYDE BENNETT KENDALL	B.S. 1897	Santo Domingo City, R. D.
Topographic Engineer, U. S. Geological Survey, Assistant Jefe de Agrimensores, Dominican Republic		
RICHARD GREENE KENDRICK	B.E. 1921	Schoolfield, Va.
With Dan River Cotton Mills		
ALPHEUS ROUNTREE KENNEDY	B.S. 1898	Braintree, Miss.
Supervising Draftsman, Hull Engineering Division, Fore River Plant, Bethelhem Shipbuilding Corp., Ltd.		
JAMES MATTHEW KENNEDY	B.E. 1903	Raleigh, N. C.
Architect		
SYDNEY GUSTAVUS KENNEDY	B.S. 1897	Lakeland, Fla.
Master Mechanic, Atlantic Coast Line Railroad		
WOODFORD ARMSTRONG KENNEDY	B.E. 1916	Charlotte, N. C.
Southern Representative, Electro Bleaching Gas Co.		
WILLIAM PENDLETON KENNEDY	B.E. 1916	Warsaw, N. C.
Superintendent of Warsaw Water and Power Plant		
WILLIAM KERR	B.S. 1904	Boise, Idaho
M.S. 1912, V. P. I. State Supervisor of Vocational Agriculture		
GEORGE EDISON KIDD	B.E. 1913	Hampton, Va.
With N. N. and H. Railway, G. & E. Co.		
WAVERLY FLETCHER KILPATRICK	B.S. 1915	Asheville, N. C.
Cashier, Southeastern Express Co.		
PAUL HANNER KIME	B.S. 1916	Raleigh, N. C.
Plant Breeder, N. C. Experiment Station		
PAUL KING	B.E. 1914	Charlotte, N. C.
C.E. 1916, Cornell University. With Southern Engineering Co.		
CARL JAMES KIRBY	B.S. 1917	Richmond, Va.
2904 Park Avenue		
LUTHER HILL KIRBY	B.E. 1910	Not located
SAM JONES KIRBY	B.S. 1912	Smithfield, N. C.
County Farm Demonstration Agent		
CHARLES DICKERSON KIRKPATRICK	B.S. 1921	Waynesboro, Va.
Athletic Director, Fishburne Military School		
WILLIAM FRANKLIN KIRKPATRICK	B.E. 1904	Storrs, Conn.
B.Agr. 1905. Professor of Poultry Husbandry, Connecticut Agricultural College		

Name	*Degree*	*Address*
LYMAN KISER	B.S. 1918	Raleigh, N. C.
Manager, Pine State Creamery		
JOSEPH LAWRENCE KNIGHT	B.S. 1897	Stocktonia, Fla.
LOUIS BRASWELL KNIGHT	B.S. 1913	Manila, P. I.
First Lieutenant, Forty-Third Infantry, U. S. A., Fort William McKinley		
ROBERT VERNON KNIGHT	B.S. 1915	Tarboro, N. C.
Farmer		
STARR NEELY KNOX	B.E. 1905	Charlotte, N. C.
Assistant Engineer, Southern Railway Co.		
WILLIAM GRAHAM KNOX	B.S. 1906	New York, N. Y.
Electro-Chemist, Research and Development Laboratory, Chemical Branch, Western Electric Co.		
LAFAYETTE FRANCK KOONCE	B.Agr. 1907	Raleigh, N. C.
D.V.M. 1909, Kansas City Veterinary College. Veterinary Surgeon		
FRANK KIPP KRAMER	B.E. 1915	Elizabeth City, N. C.
With Kramer Bros. Co., Lumber Manufacturers and Dealers		
HERBERT WILLIAM KUEFFNER	B.E. 1908	Durham, N. C.
Director Public Works		
FREDERICK CREECY LAMB	B.S. 1898	El Paso, Texas
Chemist, City Health Office		
CLAUDE MILTON LAMBE	B.E. 1908	Raleigh, N. C.
Civil Engineer		
CARL JOSHUA LAMBETH	B.E. 1912	Tsinan, China
Salesman, Anderson-Meyers Co. Ltd.		
BENNETT LAND, JR.	B.E. 1903	Apopka, Fla.
Secretary and Treasurer, Consumers Lumber and Veneer Co.		
JOHN THOMAS LAND	B.E. 1903	Orlando, Fla.
321 East Jackson St.		
JOHN HAYWOOD LANE	B.S. 1921	Wilson, N. C.
Farmer		
JAMES THOMAS LARKINS	B.E. 1919	State College, Pa.
Instructor, Pennsylvania State College		
MARK CLINTON LASITTER	B.E. 1910	Snow Hill, N. C.
Civil Engineer		
FRANK LEE LASSITER	B.E. 1920	Spartanburg, S. C.
With J. B. Caldwell & Co.		
HARRY VANN LATHAM	B.S. 1919	R. 1, Belhaven, N. C.
Farmer		
JAMES EDWARD LATHAM	B.S. 1909	Parmele, N. C.
Merchant		
CHARLES EDWARD LATTA	B.E. 1908	Not located
WILLIAM ANDREW FRANKLIN LAWING	B.E. 1921	Huntersville, N. C.
JOEL BREVARD LAWRENCE	B.S. 1921	Rockingham, N. C.
Teacher of Vocational Agriculture		
DOUGLAS ALLEN LEARD	B.E. 1914	Norfolk, Va.
Right of Way Engineer, Seaboard Air Line Railway		
ANDREW JOHN LEDDY	B.S. 1921	Raleigh, N. C.
Instructorin Dyeing, N. C. State College		
CURTIS WILLIAMS LEE	B.E. 1912	Monroe, N. C.
Superintendent, Water and Light Plant		
EUGENE TALMAGE LEE	B.E. 1910	Dunn, N. C.
Insurance and Real Estate		
JOSEPH LEE, JR.	B.S. 1917	Pekin, China
Student, Foreign Mission Board of Southern Baptist Convention		
WILLIAM DANIEL LEE	B.S. 1918	Asheville, N. C.
With N. C. Department of Agriculture, Soil Survey		
WILLIAM EDWARD LEEPER	B.E. 1918	Gastonia, N. C.
Civil Engineer		
EDWIN CLINARD LEGRAND	B.E. 1921	Shelby, N. C.
Shelby Cotton Mill		
JOSEPH RAOUL LEGUENEC	B.E. 1915	Tyler, Texas
Assistant Division Engineer, St. Louis Southwestern Railway Co.		

Name	*Degree*	*Address*
SAMUEL GEORGE LEHMAN	M.S. 1917	Raleigh, N. C.
Assistant Pathologist, N. C. Agricultural Experiment Station		
CHARLES RILEY LEONARD	B.S. 1918	Reynolda, N. C.
Poultryman, Raynolda Farm, Inc.		
JAMES GILMORE LEONARD	B.E. 1919	Atlanta, Ga.
With Georgia Railway and Power Co.		
ELBERT FRANCIS LEWIS	B.E. 1918	Seattle, Wash.
Junior Hydrographic and Geodetic Engineer, U. S. Coast and Geodetic Survey		
IRVIN TRACEY LEWIS	B.S. 1915	Charlotte, N. C.
Veterinarian		
JAMES FURMAN LEWIS	B.E. 1921	Chester, Pa.
With Aberfoyle Manufacturing Co.		
ROBERT LINGLE LEWIS	B.E. 1918	Monroe, N. C.
WILLIAM DIXON LEWIS	B.S. 1914	Not located
MORRIS LIFEROCK	B.E. 1913	Washington, D. C.
C.E. 1917. Assistant, American Ephemeris, U. S. Naval Observatory. Member, Washington Society of Engineers. Member, Philosophical Society of Washington		
JESSE JULIAN LILES	B.E. 1901	Baltimore, Md.
With Power and Mining Department, General Electric Co.		
HENRY ALBERT LILLY	B.S. 1917	Badin, N. C.
Bacteriologist, Tallassee Power Co.		
HENRY MARVIN LILLY	B.E. 1905	New Bern, N. C.
Resident Engineer, N. C. State Highway Commission		
ERNEST ERWIN LINCOLN	B.E. 1914	Newark, N. J.
With Submarine Boat Corporation		
JESSE WEBB LINDLEY	B.S. 1915	Brevard, N. C.
County Agricultural Demonstration Agent		
DAVID LINDSAY	B.E. 1908	Fieldale, Va.
Superintendent, Fieldale Mills		
ROBERT OPIE LINDSAY	B.E. 1916	Bedford, Va.
Secretary-Treasurer, Peaks of Otter Lumber Co., Inc.		
JOHN HENRY LITTLE	B.E. 1908	Charlotte, N. C.
Sales Engineer, General Electric Co.		
WILLIAM BENNETT LITTLE	B.S. 1914	Wadesboro, N. C.
Farmer		
MARION LAMAR LIVERMON	B.E. 1914	Charlotte, N. C.
Chief Draftsman, Southern Engineering Co.		
ULPHIAN CARR LOFTIN	B.S. 1910	Tlahualilo, Dgo., Mex.
With Compania del Tlahualilo		
FORREST BAINIE LONG	B.E. 1919	R. 3, Charlotte, N. C.
HOMER DEWITT LONG	B.E. 1921	Raleigh, N. C.
With N. C. State Highway Commission		
PAUL THOMAS LONG	B.S. 1919	Burlington, N. C.
Principal, Glencoe School		
RALPH LONG	B.S. 1909	Winston-Salem, N. C.
Chero-Cola Co.		
SAMUEL MARSH LONG	B.E. 1921	Cincinnati, Ohio
With Century Electric Co.		
LOUIS EDGAR LOUGEE	B.S. 1907	Not located
LOUIS OMER LOUGEE	B.E. 1901	Huntington, W. Va.
Chief Engineer Island Creek Coal Company and Pond Creek Coal Co.		
THOMAS PINKNEY LOVELACE	B.E. 1912	Lincolnton, Ga.
GEORGE LAFAYETTE LYERLY	B.E. 1908	Hickory, N. C.
Hardware Dealer		
LIPSCOMBE GOODWIN LYKES	B.E. 1905	Havana, Cuba
Vice President, Lykes Brothers, Inc.		
THOMPSON MAYO LYKES	B.E. 1906	Tampa, Fla.
Vice President, Lykes Brothers, Inc.		
GEORGE GREEN LYNCH	B.E. 1905	Wilmington, N. C.
Chief Draftsman, Atlantic Coast Line Railway Co.		
ALBERT SYDNEY LYON	B.S. 1899	Rocky Mount, N. C.
Superintendent, Rocky Mount Public Works		

Name	*Degree*	*Address*
EDMOND SHAW LYTCH	B.E. 1903	Laurinburg, N. C.
Partner, Laurinburg Machine Co.		
WILLIAM MCNEIL LYTCH	B.E. 1893	Laurinburg, N. C.
Partner, Laurinburg Machine Co.		
JAMES EDGAR MACDOUGALL	B.E. 1917	Raleigh, N. C.
Salesman, Atlantic Dyestuff Co.		
WALTER HOGE MACINTIRE	B.S. 1905	Knoxville, Tenn.
M. S. Pennsylvania State College, 1909; Ph.D. Cornell, 1916. Head of Department of Soil Chemistry, University of Tennessee Agricultural Experiment Station		
DONALD GRATTAN MCARN	B.E. 1915	Northside, Pittsburgh, Pa.
In charge Tests and Inspection, Pittsburgh Transformer Co.		
JAMES ROBERT MCARTHUR	B.S. 1917	R. 6, Greenville, N. C.
Farmer		
ZEBULON ARCHIBALD MCCALL	B.S. 1919	Chapel Hill, N. C.
Student at Chapel Hill		
FRANK WHITESIDE MCCOMB	B.E. 1913	Bluemont, Va.
Farmer and Dairyman		
HENRY KREIGER MCCONNELL	B.S. 1907	Richmond, Va.
Manager, Richmond Branch, Tobacco By-Products and Chemical Corporation		
ALEXANDER BRYAN MCCORMICK	B.E. 1920	Fieldale, Va.
With Carolina Cotton and Woolen Mills		
WILSON COPES MCCOY	B.S. 1921	Red Springs, N. C.
Agricultural Instructor, State Department Vocational Education		
EUGENE RICHARD MCCRACKEN	B.E. 1911	Winston-Salem, N. C.
Cotton Classer, Arista Mills Co.		
THOMAS ROBERT MCDEARMAN	B.E. 1914	Rocky Mount, N. C.
With J. J. Wells, Civil Engineer		
RALPH MCDONALD	B.E. 1918	Raleigh, N. C.
With McDonald Tire and Accessory Store		
FRANK NEELY MCDOWELL	B.S. 1910	Waco, Texas
Automobile Dealer		
ROBERT WISSNER MCGEACHY	B.E. 1917	Charlotte, N. C.
Manager, N. C. Branch Ingalls Iron Works Co.		
JAMES EDWARD MCGEE	B.E. 1912	Rosemary, N. C.
With Rosemary Manufacturing Co.		
HARRY GALLANT MCGINN	B.E. 1919	Spray, N. C.
With Carolina Cotton and Woolen Mills Co.		
MALCOLM ROLAND MCGIRT	B.Agr. 1905	R. 2, Sanford, N. C.
Farmer		
JOHN FAIRLY MCINTYRE	B.E. 1904	Laurinburg, N. C.
Farmer		
SAMUEL CHRISTOPHER MCKEOWN	B.E. 1895	Jersey City, N. J.
Chief Designing Engineer, Federated Engineering Development Corporation		
CHARLES MCKIMMON, JR.	B.S. 1911	Fairfield, Ala.
Chemist, T. C. I & R. R. Company of Ensley, Ala.		
JAMES MCKIMMON	B.E. 1904	Raleigh, N. C.
With McKimmon & McKee, Real Estate and Insurance		
JOHN LUTHER MCKINNON	B.Agr. 1902	Laurinburg, N. C.
Farmer		
HORACE SMITH MCLENDON	B.Agr. 1906	St. Augustine, Fla.
Manager, Agricultural Development Service, Florida East Coast Railroad		
LENNOX POLK MCLENDON	B.S. 1910	Durham, N. C.
Lawyer		
WALTER JONES MCLENDON, JR.	B.S. 1897	Knoxville, Tenn.
President and Manager, Prendergast Cotton Mills of Prendergast, Tenn.		
JAMES WALTER MCLEOD	B.S. 1916	Rowland, N. C.
Farmer		
JACOB WYATT MCNAIRY	B.E. 1917	Schenectady, N. Y.
Railway Equipment Engineering Department, General Electric Co.		
OSCAR FRANKLIN MCNAIRY	B.E. 1907	Jacksonville, Fla.
Division Engineer, Seaboard Air Line Railway Co.		
JAMES EDGAR MCNEELY	B.E. 1914	Mooresville, N. C.
Mooresville Cotton Mill Co.		

Name	*Degree*	*Address*
SAMUEL HUXLEY MCNEELY	B.E. 1909	Buffalo, N. Y.
Commercial Engineer, Allis-Chalmers Co.		
FRANK COBLE MCNEIL	B.E. 1917	Not located
HARVEY CAMPBELL MCPHAIL	B.S. 1914	Mount Olive, N. C.
Dairyman and Farmer		
ELBERT MCPHAUL	B.S. 1917	Red Springs, N. C.
Farmer		
CHARLES HARDEN MCQUEEN	B.E. 1901	Boston, Mass.
With Warren Brothers Company, Bitulithic Pavements		
NEILL MCQUEEN	B.E. 1912	Fayetteville, N. C.
SAMUEL MACON MALLISON	B.E. 1909	Washington, N. C.
Hardware Business		
CARROLL LAMB MANN	B.S. 1899	Raleigh, N. C.
C.E. 1906. Professor of Civil Engineering, N. C. State College		
HARVEY BLOUNT MANN	B.S. 1920	Raleigh, N. C.
With North Carolina Agricultural Experiment Station		
LOUIS HENRY MANN	B.E. 1900	Washington, N. C.
Dentist		
WALTER RAY MANN	B.S. 1912	Camp Dix, N. J.
Captain, Twenty-Eighth Infantry, U. S. A.		
WARREN STATEN MANN	B.E. 1921	Raleigh, N. C.
Draftsman, Road Department, N. C. State Highway Commission		
EDWARD BRANHAM MANNING	B.E. 1921	Rosemary, N. C.
Apprentice, With Rosemary Manufacturing Co.		
WILLIAM LEAKE MANNING	B.E. 1910	Rosemary, N. C.
Rosemary Manufacturing Co.		
CLARENCE TALMAGE MARSH	B.E. 1908	Wilmington, N. C.
Major, Coast Artillery Corps, U. S. A.		
WILLIAM ROYDAN MARSHALL	B.E. 1909	New York, N. Y.
Manager Industrial Department, Westinghouse Electric and Manufacturing Co.		
MARK STRUVE MARTENET	B.S. 1917	Alexandria, Va.
In charge of Acidulating Department, Alexandria Fertilizer and Chemical Co.		
JACOB LEE MARTIN	B.E. 1911	Marion, N. C.
County Engineer, McDowell County		
THOMAS JACKSON MARTIN, JR.	B.E. 1917	Raleigh, N. C.
Instructor, Mechanical Engineering Department, N. C. State College		
WILLIAM DANIEL MARTIN	B.E. 1915	Raleigh, N. C.
Superintendent, Baker-Thompson Lumber Co.		
JOSEPH HENRY MASON	B.E. 1916	Richmond, Va.
With Glenn Commission Co., Cotton Yarns		
RALPH CECIL MASON	B.S. 1909	Harrellsville, N. C.
Farmer		
ARTHUR BALLARD MASSEY	B.S. 1909	Blacksburg, Va.
Associate Professor of Plant Pathology and Bacteriology, Virginia Polytechnic Institute and Virginia Agricultural Experiment Station		
PEYTON HOWARD MASSEY	B.S. 1920	Zebulon, N. C.
Teacher Vocational Agriculture, Wakelon High School		
WALTER JEROME MATHEWS	B.E. 1893	Goldsboro, N. C.
Contractor		
MELVILLE LEE MATTHEWS	B.E. 1920	Hamlet, N. C.
Commercial Department, Yadkin River Power Co.		
WILLIAM EMERY MATTHEWS	B.E. 1917	Maxton, N. C.
Highway Construction, Marlboro County, S. C., Highway Commission		
ROBERT SYLVANUS MAUNEY	B.E. 1913	Kansas City, Mo.
Industrial Engineer, Kansas City Power and Light Co.		
RAYMOND MAXWELL	B.E. 1906	New Bern, N. C.
Member of Firm, Maxwell Co.		
MELVIN SOLOMON MAYES	B.E. 1910	Oxford, N. C.
With Delco Light Co.		
MORELL BATTLE MAYNARD	B.E. 1917	Raleigh, N. C.
With Howard E. Satterfield, Engineer-Builder		
FRANK THEOPHILUS MEACHAM	B.S. 1893	Statesville, N. C.
M.S. 1894. Superintendent Experiment Station, U. S. Department of Agriculture		

Name	*Degree*	*Address*
EUGENE FRANKLIN MEADOR	B.E. 1907	Danville, Va
Vice President, Reynolds-Meador Service Co., Inc.		
EDWARD NEWTON MEEKINS	B.S. 1920	Cary, N. C
Assistant Teacher of Agriculture, Cary High School		
TODD BOWMAN MEISENHEIMER	B.E. 1917	Charlotte, N. C
Technical Representative, Southern Branch, A. Klipstein & Co.		
ROBERT TOLAR MELVIN	B.S. 1913	Clinton, N. C
County Farm Demonstration Agent		
SHERROD ERVIN MENZIES	B.E. 1916	Not locate
HENRY BASCOM MERCER	B.E. 1912	Portsmouth, Va
Assistant Engineer, Valuation Department, Seaboard Air Line Railway Co.		
LEWIS LARKINS MERRITT	B.E. 1913	Wilmington, N. C
Civil Engineer, Newport Shipbuilding Co.		
REPTON HALL MERRITT	B.S. 1897	Raleigh, N. C
Secretary-Treasurer, Powell & Powell, Inc., Coal and Ice		
ROBERT GRAHAM MEWBORNE	B.S. 1896	Clarksville, Tenn
Vice President and General Manager, Nicotine Production Corporation		
BENNETT TAYLOR MIAL	B.E. 1907	Philadelphia, Pa
Manager of Erection, Belmont Iron Works		
THOMAS KENNETH MIAL	B.E. 1913	Pittsburgh, Pa
Manager, Electrical and Automotive Equipment Departments, Pittsburgh Branch, H. W. Johns-Manville Co.		
FRANK CURTIS MICHAEL	B.E. 1907	Gastonia, N. C
E.E. 1915. President, Michael & Bivens, Inc.		
JOSEPH EDGAR MICHAEL	B.S. 1914	Harmony, N. C
Teacher of Agriculture, Iredell County Farm Life School		
DAVID JOHN MIDDLETON	B.Agr. 1908	R. 2, Warsaw, N. C
Farmer		
GORDON KENNEDY MIDDLETON	B.S. 1917	Kaifeng, Chin
Teacher of Agriculture		
JOHN DANIEL MILLER	B.E. 1916	Indian Head, Md
With Bureau of Yards and Docks, U. S. Navy		
JOHN DANIEL MILLER	B.S. 1921	Fairview, N. C
Teacher of Agriculture, N. C. Department of Vocational Agriculture		
JOSEPH ALFRED MILLER	B.E. 1904	Brevard, N. C
Manager, Miller Supply Co.		
WALKER MOREHEAD MILLNER	B.E. 1909	Not locate
JOHN MAPLE MILLS	B.E. 1907	Raleigh, N. C
Partner, Mills Battery Co.		
EWING STEPHENSON MILLSAPS	B.S. 1917	Statesville, N. C
Automobile Dealer		
GRATZ BROWN MILLSAPS	B.E. 1920	Atlanta, Ga
With Southern Bell Telephone Co.		
THOMAS LEE MILLWEE	B.E. 1916	Charlotte, N. C
With Southern Bell Telephone and Telegraph Co.		
BURTON FORREST MITCHELL	B.E. 1919	Mount Holly, N. C
Overseer Spinning, Adrian Plant, American Yarn and Processing Co.		
SIMON TURNER MITCHENER	B.E. 1912	Garner, N. C
Farmer		
GRAHAM CLEMENTS MONROE	B.S. 1920	Columbus, Ohi
Student in Veterinary College of Ohio State University		
JOHN THADDEUS MONROE	B.S. 1920	R. 2, Council, N. C
Farmer		
THOMAS GUY MONROE	B.S. 1914	Hamlet, N. C
Superintendent of Manufacturing, Buttercup Ice-cream Co.		
BENJAMIN FRANKLIN MONTAGUE	B.E. 1909	Charleston, W. Va
With Virginian Power Co.		
HENRY STARBUCK MONTAGUE	B.S. 1907	Starkville, Miss
Assistant State Chemist, Miss. State Laboratory Mississippi A. & M. College		
LEON DAVIS MOODY	B.E. 1910	East La Porte, N. C
Farmer		
WARREN LAFAYETTE MOODY	B.S. 1914	Alexandria, Va
Chemist, Southern Railway System		

Name	*Degree*	*Address*
Bartholomew Figures Moore	B.E. 1921	Raleigh, N. C.
Manager of Farm		
Charles Alfred Moore	B.E. 1916	South Milwaukee, Wis.
Southeastern Representative, Line Material Co.		
Eugene Boise Moore	B.E. 1910	Morven, N. C.
Member Firm, J. E. Moore & Co.		
Eugene James Moore	B.S. 1918	North Wilkesboro, N. C.
D.V.M. 1921, Ohio State University. Veterinarian		
Lacy Moore	B.E. 1906	Washington, D. C.
Engineer of Surveys, Southern Railway System		
James Oscar Morgan	B.Agr. 1905	College Station, Texas
M.S.A. 1907; Ph.D. 1909, Cornell University. Professor of Agronomy, Texas A. and M. College		
Jesse John Morris	B.E. 1903	Weeksville, N. C.
Farmer, County Surveyor, and Road Commissioner		
William Flaud Morris	B.E. 1909	Clayton, N. C.
Secretary and Treasurer, Horne & Morris Motor Co.		
Joseph Graham Morrison	B.Agr. 1906	Stanley, N. C.
Farmer		
Robert Hall Morrison	B.E. 1900	Charlotte, N. C.
Mechanical Engineer, With Parks-Cramer Co.		
Robert Lee Morrison	B.E. 1911	Bristol, Va.-Tenn.
Member of Engineering Firm of Gladding & Morrison, Municipal Engineers, Bristol, Va.-Tenn., and Wilson, N. C.		
Augustus Ray Morrow	B.S. 1921	Troy, N. C.
County Farm Agent, Montgomery County		
Emmett Brown Morrow	B.S. 1921	Not located
John Lightfoot Morson	B.E. 1907	Raleigh, N. C.
Assistant Division Engineer, Seaboard Air Line Railway Co.		
William Field Morson	B. E. 1904	Wilmington, N. C.
District Engineer, N. C. State Highway Commission		
Laurie Mosely	B.E. 1902	Atlanta, Ga.
Thompson & Mosely, Inc., Contractors		
Manley Parker Moss	B.E. 1921	Raleigh, N. C.
Draftsman, With State Highway Commission		
Vassar Young Moss	B.E. 1902	Canonsburg, Pa.
With Fort Pitt Bridge Co.		
Harry Yeomans Mott	B.S. 1910	R. 4, Mooresville, N. C.
Farmer		
James Richard Mullen	B.S. 1912	Norfolk, Va.
Chief Probation Officer, Norfolk Juvenile and Domestic Relations Court		
Lindsley Alexander Murr	B.E. 1905	Raleigh. N. C.
Secretary-Treasurer, C. V. York Co., Incorporated		
Edward Mosby Murray	B.E. 1917	Charlotte, N. C.
With Murray-Crowell Motor Co.		
George King Murray	B.E. 1921	New York, N. Y.
Member New York Americans, New York American League Baseball Club		
William Carey Murrell	B.E. 1919	Newark, N. J.
Distribution Department, Public Service Electric Co.		
Zachariah Enniss Murrell, Jr.	B.S. 1917	Jacksonville, N. C.
Farmer		
Garland Perry Myatt	B.S. 1905	Not located
O'Kelly W. Myers	B.S. 1899	Brooklyn, N. Y.
Division Engineer, New York Water Power Investigation		
Jesse Clarence Myrick	B.E. 1906	Pedro Miguel, C. Z.
Assistant Superintendent, Pacific Locks, Panama Canal		
Leon Andrews Neal	B.E. 1904	Marion, N. C.
President and Treasurer, Marion Ice and Fuel Co.		
Willaiam McCormick Neale	B.E. 1910	Greensboro, N. C.
M.E. 1920. Consulting Mechanical Engineer		
John Franklin Neely, Jr.	B.S. 1916	Pineville, N. C.
Traveling Salesman, R. T. French Co., Rochester, N. Y.		
Charles McKee Newcomb	B.E. 1912	Banes, Oriente, Cuba
C.E. 1920. With United Fruit Co.		

Name	*Degree*	*Address*
ROBERT TIMBERLAKE NEWCOMB	B.S. 1915	Raleigh, N. C
With A. H. Byrum, Lumber		
CHARLES ARTHUR NICHOLS	B.E. 1902	Muskogee, Okla
General Contractor, 416 Equity Building		
EDGAR BYRON NICHOLS	B.E. 1914	Rochester, N. Y
M.E. 1918. Chief Engineer, The Pfaudler Co.		
TYCHO NORRIS NISSEN	B.E. 1920	Winston-Salem, N. C
Salesman, S. J. Nissen Co.		
CHARLES FRANKLIN NIVEN	B.Agr. 1906	R. 1, Ravenel, S. C
Farmer		
LOLA ALEXANDER NIVEN	B.Agr. 1906	Birmingham, Ala
Advertising Manager, Progressive Farmer		
WILLIAM TIMOTHY NIXON	B.S. 1913	Sumter, S. C
Southern Baking Co.		
DAVID BENJAMIN NOOE	B.S. 1916	Pittsboro, N. C
Farmer-Lumberman		
JOHN ANDREW NORTHCOTT, JR.	B.E. 1918	Not located
LEWIS MILTON ODEN	B.Agr. 1906	Portsmouth, Va
Norfolk Navy Yard		
THOMAS JEFFERSON OGBURN, JR.	B.E. 1906	Richmond, Va
With Everett Waddey Co.		
ALBERT HICKS OLIVER	B.S. 1897	Mount Olive, N. C
Farmer		
PAUL SHEPHARD OLIVER	B.S. 1920	R. 1, Marietta, N. C
Farmer		
SAMUEL LOFTIN OLIVER	B.E. 1909	Clinton, N. C
Manager, Ice Plant		
VICTOR FREDERICK ORLANDO OLIVIER	B.S. 1921	Kalkspruit, Transvaal, South Africa
CARL FRANKLIN OSBORNE	B.E. 1915	Winter Garden, Fla
Superintendent of Construction with J. B. McCrary Company, Atlanta, Ga.		
DWIGHT HENDRICKS OSBORNE	B.S. 1920	Yadkinville, N. C
County Agent, Cooperative Extension Work		
HENRY BLOUNT OSBORNE	B.S. 1918	Clyde, N. C
Practising Veterinary Medicine		
DOLPHIN HENRY OVERTON	B.S. 1921	Nashville, N. C
Demonstration Agent, Chilean Nitrate Committee		
JAMES ELWOOD OVERTON	B.Agr. 1907	Ahoskie, N. C
Traveling Grader, Inspector, and Peanut Buyer for American Peanut Corporation		
DAVID STARR OWEN	B.E. 1903	Savannah, Ga
General Superintendent, Atlantic Turpentine and Pine Tar Co.		
EDWIN BENTLEY OWEN	B.S. 1898	Raleigh, N. C
Registrar, N. C. State College		
CHARLES WASHINGTON OWENS	B.E. 1912	Raleigh, N. C
Engineer of Construction, State School for the Blind and Deaf		
REID ALLISON PAGE	B.S. 1916	Aberdeen, N. C
Farmer and Fruit Grower		
JOHN ALSEY PARK	B.E. 1905	Raleigh, N. C
Publisher, Raleigh Times		
CLYDE ESTER PARKER	B.S. 1906	Raleigh, N. C
Member of Firm, C. E. Parker & Co., Cotton Brokers and Merchants		
EUGENE LEROY PARKER	B.S. 1899	Mount Pleasant, Tenn
Chemist and Manager, E. L. Parker & Co.		
GEORGE MASON PARKER	B.E. 1919	Norfolk, Va
U. S. War Department, Room 15, Engineer's Office		
JAMES LAFAYETTE PARKER	B.E. 1902	Columbia, S. C
Bridge Engineer, South Carolina State Highway Department		
JOHN HARVEY PARKER	B.E. 1903	New Bern, N. C
President, Service Motor Corps and Tidewater Automotive Co.		
JULIUS MONROE PARKER	B.E. 1909	Not located
THOMAS FRANKLIN PARKER	B.Agr. 1907	Raleigh, N. C
M.S. 1908. Agricultural Statistician (U. S. and N. C. Departments of Agriculture) Crop Reporting Service		

Name	*Degree*	*Address*
ALTER HERBERT PARKER	B.E. 1913	Raleigh, N. C.
310 Vance Apartments		
RED MAYNARD PARKS	B.E. 1907	East Pittsburgh, Pa.
Industrial Control Engineer, Westinghouse Electric and Manufacturing Co.		
HADDEUS ROWLAND PARRISH	B.E. 1913	Chicago, Ill.
Assistant Purchasing Agent, United States Gypsum Co.		
'ALTER LEAK PARSONS, JR.	B.E. 1918	Rockingham, N. C.
Secretary and Treasurer, Leak-Parsons Co.		
RTHUR LEE PASCHALL	B.Agr. 1907	Riverside, Cal.
Agent for "The Golden Age," "The Finished Mystery," and "Millions Now Living Will Never Die"		
OHN GILBERT PASCHAL	B.E. 1909	Goldston, N. C.
Lumber Manufacturer		
DWIN PATE	B.S. 1921	Laurel Hill, N. C.
Manager for Z. V. Pate		
'ILLIAM FRANKLIN PATE	B.S. 1901	Raleigh, N. C.
M.S. 1913. With Soil Fertility Section, Division of Agronomy, N. C. Department of Agriculture		
'ANN CABE PATTERSON	B.E. 1895	Durham, N. C.
OBERT DONELL PATTERSON	B.S. 1894	Chase City, Va.
M.S. 1898. President, The First State Bank		
ITZGERALD ELIZUR PATTON	B.S. 1914	Bud, Ky.
Farmer		
'ILLIAM JOEL PATTON	B.E. 1904	Dallas, Texas
Manager, New Business Department, Dallas Power and Light Co.		
'ILLIAM ROBERT PATTON	B.E. 1914	Morganton, N. C.
Superintendent of Roads, Burke County		
OBERT JAMES PEARSALL	B.E. 1920	Raleigh, N. C.
Instructor, Electrical Engineering Department, N. C. State College		
'ILLIAM VICTOR PEARSALL	B.S. 1915	Wilmington, N. C.
Pearsall & Co.		
'HARLES PEARSON	B.E. 1894	Atlanta, Ga.
Superintendent, Atlantic Bridge Company, of Roanoke, Va.		
EWIS BERNARD PECK	B.E. 1921	Raleigh, N. C.
Road Department, State Highway Commission		
'RED TAYLOR PEDEN	B.S. 1911	Springdale, N. C.
Agent in Animal Husbandry, North Carolina Department of Agriculture		
AMES MURCHISON PEDEN	B.E. 1920	Pittsburgh, Pa.
Student in Industrial Sales, Westinghouse Electric and Manufacturing Co.		
OHN TAYLOR PEDEN	B.E. 1911	Pittsburgh, Pa.
Salesman, Westinghouse Electric and Manufacturing Co.		
'HOMAS CLAYTON PEGRAM	B.E. 1916	McColl, S. C.
Superintendent, Marlboro Cotton Mill No. 3		
'OSEPHUS DANIELS PELL	B.E. 1921	Kannapolis, N. C.
With Cannon Manufacturing Co.		
'ILLIAM CASPER PENNINGTON	B.E. 1910	New London, N. C.
Secretary-Treasurer, The New London Hosiery Co.		
AMUEL OSCAR PERKINS	B.S. 1906	Washington, D. C.
Soil Scientist, U. S. Department of Agriculture		
'ILTON VANCE PERRY	B.E. 1914	Elizabeth City, N. C.
Retail Grocer		
UGENE GRAY PERSON	B.S. 1899	Macon, Ga.
Train Dispatcher, Central of Georgia Railway		
'ILLIAM MONTGOMERY PERSON	B.E. 1900	Detroit, Mich.
With Semet-Solvay By-Product Coke Plant		
DWARD ANCEL PETERKIN	B.S. 1921	Fort Motte, S. C.
Farmer		
SA GRAY PHELPS	B.E. 1915	Newport News, Va.
Technicist, Newport News Shipbuilding and Dry Dock Co.		
REDERICK COLWELL PHELPS	B.E. 1904	Washington, D. C.
Major Infantry, Care Adjutant General of Army		
ENRY MARRIOTT PHILIPS	B.S. 1914	Battleboro, N. C.
Farmer		

Name	*Degree*	*Address*
ARTHUR JEFFERSON PHILLIPS, JR.	B.S. 1914	Portsmouth, Va.
Real Estate		
CHARLES FULLER PHILLIPS	B.S. 1920	Thomasville, N. C.
Manager, Thomasville Realty and Trust Company, Secretary-Treasurer, Home Building and Loan Association		
WILLIAM RANSOM PHILLIPS	B.E. 1910	Richmond, Va.
E.E. 1913. Specialist, Western Electric Co.		
PETER PENICK PIERCE	B.E. 1909	St. Augustine, Fla.
Care Florida East Coast Railway		
ROSS DUNFORD PILLSBURY	B.E. 1920	Raleigh, N. C.
Draftsman, Nelson and Cooper, Architects		
GUY PINNER	B.E. 1907	New York City
Civil Engineer, James A. Stewart and Co.		
JOHN GAY PINNER	B.S. 1915	Elizabeth City, N. C.
Pinner Brothers		
WINSLOW GERALD PITMAN	B.E. 1907	Lumberton, N. C.
Farmer		
PAUL NATHANIEL PITTENGER	B.E. 1911	Raleigh, N. C.
1905 Park Drive		
BENJAMIN FRANKLIN PITTMAN	B.E. 1908	Philadelphia, Pa.
With Wm. Cramp & Sons, Ship and Engine Building Co.		
LAWRENCE LYON PITTMAN	B.E. 1908	Whitakers, N. C.
Farmer		
PAUL MILLER PITTS	B.E. 1909	Birmingham, Ala.
Machinist, Tennessee Coal, Iron and Railroad Co.		
ANGELO BETTLENA PIVER	B.E. 1906	Newark, N. J.
Assistant Engineer, Submarine Boat Corporation, Newark Bay Shipyard		
WILLIAM CRAWFORD PIVER	B.S. 1906	New York, N. Y.
Riches, Piver & Co., Chemical and Color Manufacturers		
JAMES KEMP PLUMMER	B.S. 1907	East Point, Ga.
M.S. 1909; Ph.D. 1915, Cornell University. Chief Chemist and Superintendent Factory Operations, Southern Agricultural Chemical Corporation		
ROBERT AVERY PLYLER	B.E. 1914	Not located
PLEASANT H. POINDEXTER, JR.	B.Agr. 1905	Vici, Okla.
Manager, The Long-Bell Lumber Co.		
FREDERICK DAVIS POISSON	B.S. 1914	Durham, N. C.
With Liggett & Myers Tobacco Co.		
JULIAN HAWLEY POOLE	B.S. 1917	Jackson Springs, N. C.
Orchardist		
RUBLE ISAAC POOLE	B.E. 1908	Raleigh, N. C.
Civil Engineer		
EDWARD GRIFFITH PORTER	B.E. 1905	Goldsboro, N. C.
Civil Engineer and Surveyor		
EDWIN THEODORE PORTER	B.E. 1920	Georgetown, S. C.
Teller, Planters and Mechanics Bank		
JUNIUS EDWARD PORTER	B.E. 1900	Aurora, N. C.
President, J. E. Porter Co., Inc.		
TRACY WINCHESTER PORTER	B.S. 1914	Stovall, Miss.
Manager, Carson Bros.		
BRYANT MONROE POTTER	B.E. 1912	New Bern, N. C.
Civil Engineer		
WILLIAM OWEN POTTER	B.E. 1919	Baltimore, Md.
Standard Oil Company		
ZEB. VANCE POTTER	B.E. 1919	Spray, N. C.
Assistant Manager, Nantucket and Lily Mills		
HARRY ALEXANDER POWELL	B.E. 1908	Jacksonville, Fla.
20 West Monroe St., Naval Stores Operator		
JAMES ALEXANDER POWELL	B.E. 1908	Reading, Pa.
Mechanical Engineer, W. S. Barstow Management Association		
JAMES ROBERT POWELL	B.S. 1921	Burgaw, N. C.
County Demonstrator, Agricultural Extension Service		
JOEL POWERS	B.E. 1903	Goldsboro, N. C.
Draftsman, Dewey Bros., Inc.		

Name	*Degree*	*Address*
THOMAS MILTON POYNER	B.E. 1908	Savannah, Ga.
Superintendent of Construction, Gadsden Contracting Co.		
PALMER WILLIAM PRESSLY	B.E. 1919	Mooresville, N. C.
Superintendent, Municipal Water, Light & Water Plant		
JAMES BRUCE PRICE	B.E. 1910	South Charleston, W. Va.
Electrical Engineer, U. S. Naval Ordnance Plant		
JOHN MOIR PRICE	B.E. 1909	Not located
JOHN BAILEY PRIDGEN	B.E. 1916	Charlotte, N. C.
C.E. 1921. District Engineer, Sixth District, N. C. State Highway Commission		
ABRAM HINMAN PRINCE	B.S. 1895	R. 1, Beaumont, Texas
Superintendent, Substation N. 4, State Experiment Station		
CHARLES MARCELLUS PRITCHETT	M.E. 1895	Raleigh, N. C.
C.E. 1896. State Highway Commission		
VICTOR VASHTI PRIVOTT	B.E. 1895	Suffolk, Va.
Mechanic and Electrician		
FRANK WILSON PROCTER	B.E. 1915	Baltimore, Md.
General Engineer, Black & Decker Manufacturing Co.		
JESSE HARRIS PROCTOR	B.E. 1921	East Durham, N. C.
Instrumentman, N. C. State Highway Commission		
CARL CLAWSON PROFFITT	B.S. 1915	Asheville, N. C.
County Agent, Buncombe County		
CHARLES LANDON PROFFITT	B.S. 1915	Black Mountain, N. C.
Orchardist		
THOMAS HECTOR PURCELL	B.S. 1913	Maxton, N. C.
JACK ADDISON PUREFOY	B.S. 1916	Asheville, N. C.
27 Charlotte St.		
HENRY AUBREY QUICKEL	B.S. 1913	Charlotte, N. C.
With American Telephone and Telegraph Co.		
JOSEPHUS PLUMMER QUINERLY	B.S. 1911	Bishopville, S. C.
Lee County Agricultural Agent		
MILLARD REED QUINERLY	B.S. 1914	Miami, Fla.
Care Hotel Francis		
KIRBY JERNIGAN QUINN	B.S. 1921	Augusta, Ga.
Bookkeeper, Maxwell Brothers		
CHARLES LOUIS RACKLEY	B.S. 1921	Asheville, N. C.
With Carolina Creamery Co.		
WALTER ROSCOE RADFORD	B.S. 1917	Spruce Pine, N. C.
With N. C. and U. S. Departments of Agriculture		
DILLARD CHARLES RAGAN	B.E. 1920	High Point, N. C.
National Aniline and Chemical Co.		
OLIVER RAMSAUR	B.E. 1920	Raleigh, N. C.
Engineering Department, Carolina Power and Light Co.		
PARKER ROYALL RAND	B. S. 1916	R. 2, Garner, N. C.
Farmer		
HENRY RANKIN	B.E. 1916	Gastonia, N. C.
President and Treasurer, Rankin Mills, Inc., V. P. Pinkney Mills, V. P. Ridge Mills, Inc.		
JOHN OLAN RANKIN, JR.	B.S. 1913	Gastonia, N. C.
WILLIAM WALTER RANKIN	B.E. 1904	Decatur, Ga.
Professor Mathematics, Agnes Scott College		
JOHN DUNCAN RAY	B.S. 1915	Kansas City, Mo.
D.V.M. 1917. With Kinsley Laboratories		
LEWIS BANKS RAY	B.E. 1916	Milwaukee, Wis.
Steam Turbine Designer, Allis-Chalmers Manufacturing Co.		
DAVID MILLER REA	B.E. 1917	Durham, N. C.
With State Highway Commission		
HUGH CALVIN REA	B.S. 1916	Charlotte, N. C.
D.V.M. Kansas City Veterinary College, 1918. Veterinarian		
JAMES LATHAN REA	B.S. 1919	R. 27, Matthews, N. C.
Farmer		
RISDEN PATTERSON REECE	B.E. 1904	Winston-Salem, N. C.
Mechanical Engineer, Engineering Department, R. J. Reynolds Tobacco Co.		
JOHN BARTOW REES	B.E. 1914	Atlanta, Ga.
Machine Switching Equipment Engineer, Southern Bell Telephone and Telegraph Co., and Cumberland Telephone and Telegraph Co., Inc.		

Name	*Degree*	*Address*
ROBERT RICHARD REINHARDT	B.S. 1909	Lincolnton, N. C.
Veterinarian		
WILLIAM BENEDICT REINHARDT	B.E. 1902	Dawson City, Yukon Territory
Electrician, Dawson City Electric Light and Power Co.		
CALEB EDWARD RHODES	B.E. 1920	Gastonia, N. C.
Electrical Engineer, Michael and Bivens, Inc.		
MARTIN LUTHER RHODES	B.E. 1921	Raleigh, N. C.
Assistant Supervisor Trades and Industries, Division of Vocational Education of North Carolina		
VICTOR ARTHUR RICE	B.S. 1917	Amherst, Mass.
Assistant Professor of Animal Husbandry, Massachusetts Agricultural College		
WADE HAMPTON RICE	B.S. 1921	Athens, Ga.
Adjunct Professor, Poultry Husbandry Division, Georgia State College of Agriculture		
ROGER FRANCIS RICHARDSON	B.E. 1900	Birmingham, Ala.
Construction Engineer, Semet-Solvay Co.		
WILLIAM RICHARDSON, JR.	B.E. 1904	Ensley, Ala.
Assistant Superintendent, Coal Washeries, Coal Mining Department, Tennessee Coal, Iron and Railroad Co.		
EDWARD HAYES RICKS	B.E. 1903	Roanoke Rapids, N. C.
Real Estate Dealer		
WALLACE WHITFIELD RIDDICK	B.E. 1916	Demopolis, Ala.
Secretary-Treasurer, Demopolis Mills		
LOUIS NAPOLEON RIGGAN	B.E. 1912	Norfolk, Va.
Chief Clerk to Chief Engineer, Seaboard Air Line Railway		
ALFRED PRATTE RIGGS	B.E. 1909	Key West, Fla.
With South Florida Contracting and Engineering Co.		
JOHN HOLLIS RIPPLE	B.E. 1921	Fieldale, Va.
Marshall Fields Co.		
RAY MILLER RITCHIE	B.S. 1916	Charlotte Courthouse, Va.
Teacher of Vocational Agriculture		
WILLIAM LEWIS ROACH	B.E. 1920	Raleigh, N. C.
Assistant Engineer, City of Raleigh		
THURMAN LESTER ROBERSON	B.E. 1914	Newport News, Va.
With Order Department, Newport News Shipbuilding and Dry Dock Co.		
DANIEL ERNEST ROBERTS	B.S. 1914	Red Springs, N. C.
Farmer		
JOHN MORGAN ROBERTS	B.S. 1914	Louisville, Ga.
Farmer		
PHILIP AUSTIN ROBERTS	B.E. 1916	Durham, N. C.
With W. M. Piatt, Municipal Engineer		
ARCHIE KNIGHT ROBERTSON	B.S. 1912	Goldsboro, N. C.
Wayne County Farm Demonstration Agent		
DURANT WAITE ROBERTSON	B.E. 1906	Washington, D. C.
President, Armorshield Paint Corporation		
HORACE BASCOMB ROBERTSON	B.E. 1917	Kannapolis, N. C.
With Cannon Manufacturing Co.		
JOHN PAUL ROBERTSON	B.S. 1916	R. 1, Rowland, N. C.
Farmer		
JOSEPH HENRY ROBERTSON	B.E. 1909	Salisbury, N. C.
With North Carolina Public Service Co.		
RALPH REED ROBERTSON	B.E. 1920	Rock Hill, S. C.
With Southeastern Construction Co.		
GEORGE RANDOLPH ROBINSON	B.E. 1919	Lynn, Mass.
Student Engineer, General Electric Co.		
JAY FREDERICK ROBINSON	B.E. 1910	Hampton, Va.
Teaching at Hampton Institute		
ZEB BLAINE ROBINSON	B.E. 1916	Asheville, N. C.
Building and Contracting		
GASTON WILDER ROGERS	B.E. (Elec.) 1903	Atlanta, Ga.
B.E. (Civil) 1905. Captain, Medical Corps, U. S. Army		
JAMES HENRY ROGERS	B.S. 1917	R. 1, Roxboro, N. C.
Part Owner and Manager, Ioka Stock Farm		
WILLIAM HAYWOOD ROGERS, JR.	B.E. 1916	Greenville, N. C.
Engineer, Pitt County Highway Commission		

Name	*Degree*	*Address*
JOHN WESLEY ROLLINSON	B.E. 1911	Savannah, Ga.
President, Delta Electric Co.		
THOMAS DAVIS ROPER, JR.	B.S. 1921	Hurricane, W. Va.
Instructor, High School		
WILLIAM EDWIN ROSE	B.E. 1900	Washington, D. C.
Ordnance Department, United States Government		
CHARLES BURDETTE ROSS	B.E. 1903	Charlotte, N. C.
Secretary and Treasurer, Model Steam Laundry Co.		
FLOYD DE ROSS	B.E. 1900	Lawton, Okla.
Owner, Lawton Coca-Cola Bottling Co., Altus Coca-Cola Bottling Co., Altus, Okla; Duncan Coca-Cola Bottling Co., Duncan, Okla.; Frederick Coca-Cola Bottling Co., Frederick, Okla.		
GEORGE ROMULUS ROSS	B.S. 1911	Jackson Springs, N. C.
GRAEME ROSS	B.E. 1911	Kansas City, Mo.
Salesman, Kansas City Office, Westinghouse Electric and Manufacturing Co.		
OE WILLIAM ROSS	B.S. 1914	R. 2, Fort Mill, S. C.
ANDON COATS ROSSER	B.E. 1915	Sanford, N. C.
Sheriff Lee County		
MERY PELL ROUSE	B.E. 1914	LaGrange, N. C.
With the Rouse Banking Co.		
INDLEY MURRAY ROWE	B.E. 1916	Davenport, Iowa
Palmer School of Chiropractic		
ARLAND THOMAS ROWLAND	B.E. 1913	Camp Benning, Ga.
First Lieutenant, Infantry. The Infantry School		
[ORACE RALPH ROYSTER	B.E. 1918	Shelby, N. C.
Assistant Superintendent, Belmont Cotton Mills		
AMES MALCOLMSON RUMPLE	B.E. 1917	Davidson, N. C.
Engineer, Chemical Construction Company, Charlotte, N. C.		
ENRY FRED RUSH	B.S. 1916	Bennettsville, S. C.
Cotton Buyer and Salesman, Everett and Co.		
UGUSTINE JOSEPH RUSSO	B.E. 1916	Norfolk, Va.
Engineering Accountant, Norfolk-Southern Railroad Co.		
ARL COLLINS SADLER	B.E. 1910	Not located
AMES OLIN SADLER	B.E. 1909	Norfolk, Va.
Vice President, W. D. Murray-Sadler Corporation		
AVID MORTON SAINTSING	B.E. 1917	Newport News, Va.
Inspector for Newport News Shipbuilding and Dry Dock Co.		
ILLIS HUNTER SANDERS	B.S. 1897	Wichita Falls, Tex.
Oil Well Contractor		
ARION POLK SANFORD	B.S. 1919	R. 1, Stem, N. C.
Farmer		
ECIL VANN SAUNDERS	B.E. 1920	Connellsville, Pa.
Electrical Engineer, West Penn. System		
HN HYER SAUNDERS	B.E. 1894	Kinston, N. C.
Locomotive Engineer, Atlantic Coast Line Railroad		
ANIEL RUSSELL SAWYER	B.S. 1918	Harrison, N. J.
With Swift and Co.		
A OBED SCHAUB	B.S. 1900	Washington, D. C.
Agriculturist and Field Agent, U. S. Department of Agriculture		
HN FRANKLIN SCHENCK, JR.	B.E. 1914	Shelby, N. C.
Treasurer, Lily Mill and Power Co.		
ON JACOB SCHWAB	B.E. 1907	Savannah, Ga.
Junior Engineer, U. S. Engineer Office		
BERT WALTER SCOTT, JR.	B. Agr. 1905	Bolton, N. C.
Farmer		
LLIAM KERR SCOTT	B.S. 1917	R. 1, Haw River, N. C.
Farmer		
RLE ALOYSIUS SEIDENSPINNER	B.S. 1910	Opon Cebu, P. I.
Chemist, Visayan Refining Co.		
EMENT OSCAR SEIFERT	B.E. 1916	Salem Depot, N. H.
With Coca-Cola Bottling Co.		
VID WALTER SEIFERT	B.E. 1913	Weldon, N. C.
General Manager, Coca-Cola Bottling Companies of Weldon, N. C., and Woonsocket, R. I.		

Name	*Degree*	*Address*
JOHN WILLIAM SEXTON	B.E. 1910	Hamlet, N. C
Division Engineer, Seaboard Air Line Railway		
NATHAN STOWE SHARP	B.E. 1916	Mason City, Iow
Schanke & Company, Investment Bankers		
CHARLES ANTHONY SHEFFIELD	B.S. 1920	R. 1, Linwood, N. C
Agricultural Teacher, State Board of Vocational Education		
JAMES MORGAN SHERMAN	B.S. 1911	Washington, D. C
M.S. 1912; Ph.D. 1915, University of Wisconsin. Bacteriologist, U. S. Department of Agriculture		
FLEMING BATES SHERWOOD	B.S. 1912	Tulsa, Okl
M.S. 1915. With Cosden & Co.		
FRANCIS WEBBER SHERWOOD	B.S. 1909	Raleigh, N. C
M.S. 1911. Ph.D. 1921, Cornell University. Assistant Chemist in Nutrition, N. C. Department of Agriculture		
WALTER DUPRE SHIELDS	B.E. 1919	West Durham, N. C
Foreman of Erwin Bleachery, Erwin Cotton Mills Co.		
ROBERT ARNOLD SHOPE	B.E. 1909	Atlanta, G
224 N. Morehead Avenue, Traveling Salesman		
FRANK PIERCE SHORE	B.E. 1920	New Bern, N. C
With Eagle Engineering Co.		
JOHN WADE SHORE	B.S. 1900	Boonville, N. C
Cashier, Commercial and Savings Bank		
IRA SHORT	B.E. 1911	Essington, P
Assistant Engineer, Marine Engineering Department, Westinghouse Electric and Manufacturing Company, South Philadelphia Works		
JOHN HOUSTON SHUFORD	B.S. 1903	Charlotte, N. C
With National Aniline and Chemical Co.		
JOHN OSCAR SHUFORD	B.E. 1907	Lincolnton, N. C
Secretary and Treasurer, John Rudisill Manufacturing Co.		
WILLIAM TALMAGE SHULL	B.E. 1912	Newport, N. C
Civil Engineer, Shull Construction Co.		
WALTER LEITH SHUPING	B.E. 1919	Charlotte, N. C
Sales Engineer, Westinghouse Electric and Manufacturing Co.		
THOMAS PARK SIMMONS	B.E. 1917	Truxillo, Honduras, C.
With Truxillo Railroad Co.		
JOHN ASA SIMMS	M.S. 1917	Storrs, Con
Extension Animal Husbandman, Storrs, Conn.		
GEORGE GRAY SIMPSON	B.E. 1909	Norfolk, V
With T. S. Southgate & Co., Wholesale Brokers		
WILLIAM DUDLEY SIMPSON	B.E. 1913	Tampa, F
Division Engineer, Seaboard Air Railway Co.		
GUY RUDISILL SIPE	B.S. 1921	Agricultural College, M
Extension Poultryman for State of Mississippi		
FREDERICK ERASTUS SLOAN	B.S. 1899	Dallas, Tex
General Agent, Felt and Tarrant Manufacturing Co.		
KARL SLOAN	B.E. 1916	Charlotte, N.
District Office Engineer, State Highway Commission		
ROBERT LEE SLOAN	B.S. 1913	Colfax, I
County Farm Demonstration Agent		
WILLIAM NEVILLE SLOAN	B.E. 1909	Franklin, N.
Examiner of Surveys, United States Forest Service		
ALLEN ERNEST SMITH	B.S. 1918	R. 2, Hope Mills, N.
Farmer		
ANDREW THOMAS SMITH	B.S. 1899	Newport News, V
M.E. 1921. With Newport News Shipbuilding and Dry Dock Co.		
BASCOM PIERCE SMITH	B.E. 1916	West Allis, W
Estimator, Steam Turbine Department, Allis-Chalmers Co.		
EDGAR ENGLISH SMITH	B.E. 1908	Seattle, Wa
With U. S. Coast and Geodetic Survey		
EDWIN HARRISON SMITH	B.E. 1910	Weldon, N.
With Bank of Weldon		
EDWARD OSCAR SMITH	B.E. 1901	Newport News,
With Newport News Shipbuilding and Dry Dock Co.		

Name	*Degree*	*Address*
Francis Clark Smith	B.E. 1913	Clinton, N. C.
Resident Engineer, State Highway Commission		
Frank Steed Smith	B.E. 1913	Cleveland, Ohio
Engineer, Ohio Bell Telephone Co.		
James Lawrence Smith, Jr.	B.E. 1908	Portsmouth, Va.
Duke and Smith, Contractors and Engineers		
James McCree Smith	B.S. 1912	Not located
Jonathan Rhodes Smith	B.E. 1905	Not located
Orus Wilder Smith	B.E. 1912	Newark, N. J.
Service Manager, Splitdorf Electrical Co.		
Walter Herbert Smith	B.E. 1914	Pittsburgh, Pa.
E.E. 1921. Railway Equipment Division, Engineering Department, Westinghouse Electric and Manufacturing Co.		
Walter Johnston Smith, Jr.	B.S. 1915	R. 3, Scotland Neck, N. C.
Farmer		
Whiteford Ingersoll Smith	B.E. 1915	Biltmore, N. C.
Assistant Superintendent, Asheville Mica Co.		
William Nathan Harrell Smith, Jr.	B.E. 1920	Raleigh, N. C.
434 Halifax St.		
William Turner Smith	B.E. 1900	Dunn, N. C.
Concrete Bridge Inspector, State Highway Commission		
Thomas Jehu Smithwick	B.S. 1897	Mount Airy, N. C.
Consulting and Erecting Engineer		
Paul Elwood Snead	B.E. 1916	Reidsville, N. C.
With Signal Department, Southern Railway		
Russell Elstner Snowden	B.E. 1902	Kinston, N. C.
District Highway Engineer, North Carolina State Highway Commission		
Joseph McKay Spears	B.E. 1915	Raleigh, N. C.
With State Highway Commission		
John Henry Speas	B.S. 1916	East Bend, N. C.
Farmer, Teacher, Operator Roller Mill		
Edward Pinkney Speer	B.E. 1912	Waco, Texas
Superintendent of Shops, Texas Light and Power Co.		
Colin George Spencer	B.S. 1913	Carthage, N. C.
Lumber and Timber Dealer		
Herbert Spencer	B.S. 1915	Columbus, Ohio
M.S. 1917. Graduate Student, Ohio State University		
John Davidson Spinks	B.E. 1905	Winston-Salem, N. C.
C.E. 1913. Civil Engineer		
Jesse Page Spoon	B.Agr. 1908	Burlington, N. C.
M.S. 1909; D.V.S. 1911, Kansas City Veterinary College. Veterinarian		
St. Julien Lachicotte Springs	B.S. 1910	Smithfield, N. C.
Whitehead & Springs, Wholesale and Retail Builders' Supplies		
Robert Pinkney Stacey	B.E. 1920	Wilkinsburg, Pa.
Assistant Engineer, Duquesne Light Co.		
Ervin Blackeney Stack	B.E. 1905	Monroe, N. C.
Electrical Engineer and Chemist		
Talmage Holt Stafford	B.S. 1912	Raleigh, N. C.
Alumni Secretary, N. C. State College		
Charles Burt Stainback	B.E. 1910	East Pittsburgh, Pa.
Manager, Industrial Contract Department, Westinghouse Electric Co.		
John Alpheus Stallings	B.E. 1917	Raleigh, N. C.
Draftsman, N. C. State Highway Commission		
Edward Roe Stamps	B.E. 1903	Macon, Ga.
Division Superintendent, Southern Division, F. S. Royster Guano Co.		
Harris Ingram Stanback	B. E. 1910	Harrison, N. J.
Superintendent, Edison Lamp Works of General Electric Co.		
Jeffrey Franklin Stanback, Jr.	B.S. 1916	New York, N. Y.
Narcotic and Prohibition Chemist, Bureau of Internal Revenue		
Charles Whitson Stanford, Jr.	B.S. 1917	R. 1, Teer, N. C.
Farmer		
Ernest Elwood Stanford	M.S. 1917	Cleveland, Ohio
Professor of Pharmacognosy, Western Reserve University		

Name	*Degree*	*Address*
NUMA REID STANSEL	B.S. 1898	El Paso, Texas
E.E. 1901. Local Manager, Southwest General Electric Co.		
THOMAS BARNES STANSEL	B.S. 1910	Mascot, Tenn
With American Zinc Company of Tennessee		
CLARENCE ALEXANDER STEDMAN	B.S. 1912	Arlington, N. J
Supervisor of Inspection, E. I. Du Pont de Nemours & Co.		
ALEXIS PRESTON STEELE	B.S. 1899	Statesville, N. C
Mechanical Engineer, Firm of J. C. Steele & Sons		
JOHN BROWN STEELE	B.S. 1913	Yadkin Valley, N. C
Farmer		
LUCIUS ESEK STEERE, JR.	B.E. 1911	Washington, D. C
Assistant Electrical Engineer, Potomac Electric Power Co.		
SAMUEL FATIO STEPHENS	B.E. 1909	Norfolk, Va
Vice President, Physicians and Surgeons Supply Co.		
NEEDHAM BRYAN STEVENS	B.S. 1912	Raleigh, N. C
Fertilizer Salesman, Robertson Chemical Corporation of Norfolk, Va.		
JAMES GRAY STOKES	B.S. 1919	Elizabeth City, N. C
District Manager, Mutual Life Insurance Company of New York		
REUBEN BENNETT STOTESBURY	B.S. 1917	New Holland, N. C
Farmer		
MICHAEL ALFRED STOUGH	B.E. 1917	Chattanooga, Tenn
With the Du Pont Company. Headquarters Charlotte, N. C.		
WILLIAM BEEVER STOVER	B.E. 1913	Newark, N. J
With Sales Department, Westinghouse Electric and Manufacturing Co.		
CHARLIE BERRYHILL STOWE	B.S. 1913	Charlotte, N. C., R. F. D
Dairyman		
GEORGE YATES STRADLEY	B.E. 1903	Raleigh, N. C
With State Highway Commission		
GEDDIE BLAIR STRICKLAND	B.E. 1921	Yanceyville, N. C
Instrumentman, State Highway Commission		
JOHN SNIPES STROUD	B.E. 1908	Cooleemee, N. C
Superintendent, Erwin Cotton Mills		
JOHN GUY STUART	B.S. 1920	Jackson Springs, N. C
Farmer		
WALTER STEPHEN STURGILL	B.E. 1901	Fort Leavenworth, Kans.
Major of Field Artillery		
WILLIAM CLARK STYRON	B.E. 1910	Newport News, V
Engineering Department, Newport News Shipbuilding and Dry Dock Co.		
TEISAKU SUGISHITA	B.S. 1898	Not locat
BEVERLY NATHANIEL SULLIVAN	B.S. 1901	Winston-Salem, N.
JACOB NEELEY SUMMERELL	B.E. 1919	Cramerton, N.
With Mays Mills		
THOMAS BRYAN SUMMERLIN	B.E. 1910	Mount Olive, N.
Summerlin Implement Co.		
HENRY NEWBOLD SUMNER	B.E. 1909	Charleston, S.
Major, Coast Artillery Corps. Professor of Military Science and Tactics, Porter Military Academy		
WILBUR BURNETTE SUMNER	B.E. 1916	Germa
Captain, Field Artillery, American Forces. A. D. C. to General Allen		
DENNIS HOWARD SUTTON	B.S. 1920	Bladenboro, N.
Principal, Bladenboro High School		
LLOYD HURST SWINDELL	B.E. 1911	Raleigh, N.
Farmer		
LOUIS JOSEPH SWINK	B.E. 1917	Belmont, N.
Overhauling Machinery, Sterling Spinning Co.		
STANTON BANKS SYKES	B.E. 1913	Chicago, I
Industrial Control Specialist, General Electric Co.		
VANCE SYKES	B.E. 1907	Hamlet, N.
Division Engineer, Seaboard Air Line Railway		
GEORGE FREDERICK SYME	B.S. 1898	Raleigh, N.
C.E. 1907. Senior Highway Engineer, State Highway Commission		
RICHARD FRAZIER TABOR	B.E. 1920	Escanaba, Mi
Resident Engineer, State Highway Department		

Name	*Degree*	*Address*
REDDIE JACKSON TALTON	B.Agr. 1906	R. 2, Pikeville, N. C.
Farmer		
URDON LUCIUS TARBOX	B.E. 1917	Plainfield, N. J.
Investigating and Research Engineer, Spicer Manufacturing Corporation		
LAUDE STRATON TATE	B.E. 1909	Littleton, N. C.
Proprietor of Garage and Machine Shop		
ANIEL MCGILVARY TATE	B.S. 1915	Parkerton, Wyo.
Farmer		
EUBEN L. TATUM	B.E. 1916	Hamlet, N. C.
With State Highway Commission		
LFRED TENNYSON TAYLOR	B.S. 1916	McCullers, N. C.
RTHUR WILLIS TAYLOR	B.E. 1912	Not located
ULVER MURAT TAYLOR	B.E. 1912	Buffalo, N. Y.
With Niagara Lockport and Ontario Power Co.		
ERBERT LEE TAYLOR	B.E. 1912	Baltimore, Md.
M.E. 1920. Foreman, Baltimore and Ohio Railroad, Mt. Clare Shops		
ALTER CLYBURN TAYLOR	B.E. 1913	Hickory, N. C.
T.E. 1916. The Taylor Knitting Mills		
RTHUR LEE TEACHEY	B.S. 1915	Pleasant Garden, N. C.
Agriculturist, Pleasant Garden Farm Life School		
EN TEMPLE	B.S. 1917	Mitchells, Va.
Farmer		
MES CLARENCE TEMPLE	B.S. 1904	Ocala, Fla.
M.S. 1908. Farmer		
NIUS ALBERT TEMPLE	B.E. 1921	Raleigh, N. C.
Road Department, State Highway Commission		
ALVERN HILL TERRELL	B.E. 1909	Ronceverte, W. Va.
Chief Engineer, Greenbrier Power Plant of Virginia Western Power Co.		
HN CLIFTON TERRY	B.E. 1921	Rockingham, N. C.
Teacher		
OGER VERNON TERRY	B.E. 1918	Newport News, Va.
M.E. 1921. Engineering Department, Estimating Division, Newport News Shipbuilding and Dry Dock Co.		
HN SAM THOMPSON	B.S. 1912	Woodville, N. C.
Farmer		
EORGE LOGAN THOMPSON	B.E. 1912	Goldsboro, N. C.
P. O. Box 127		
HOMAS HAMPTON THOMPSON	B.E. 1910	Greensboro, N. C.
Chief Clerk to C. A. Pamplin, Southern Railway		
HOMAS WHITMELL THORNE	B.E. 1911	Atlanta, Ga.
Salesman, National Tube Company, Pittsburgh, Pa.		
ANIEL WOOD THORP, JR.	B.E. 1914	Charleston, S. C.
Engineer, Commissioners Public Works		
UIS DALE THRASH	B.S. 1917	Rutherfordton, N. C.
County Agricultural Demonstration Agent		
EORGE WILLIAM TIENCKEN	B.E. 1920	Schenectady, N. Y.
With General Electric Co.		
THER RUSSELL TILLETT	B.E. 1907	Zamboango, P. I.
With Fletcha Point Lumber Co.		
ICHARD HENRY TILLMAN	B.E. 1906	Baltimore, Md.
Manager, New Business Department, Consolidated Gas, Electric Light and Power Co.		
HEODORE RUGGLES TIMBY	B.E. 1921	Raleigh, N. C.
Manager, Wake Credit Service		
ILLIAM SIDNEY TOMLINSON	B.E. 1906	Columbia, S. C.
President, Tomlinson Engineering Co.		
MES EDWIN TOOMER	B.S. 1909	Toronto, Canada
Department of Metallurgy, University of Toronto		
MES RICHARD TOWNSEND	B.E. 1914	Ft. Amador, C. Z.
Captain, Coast Artillery Corps, United States Army		
SSE ERNEST TREVATHAN	B.S. 1915	Gloucester, Va.
Agricultural Extension Agent, Gloucester County		
ARION FRANCIS TRICE	B.S. 1920	Raleigh, N. C.
Instructor, Department of Chemistry, N. C. State College		

Name	*Degree*	*Address*
GEORGE REID TROTTER	B.E. 1912	Charlotte, N. C.
Vice President and Treasurer, Electrical Constructors Co.		
GEORGE BOSTON TROXLER	B.S. 1918	Browns Summit, N. C.
Merchant		
WILLIAM BROOKS TRUITT	B.E. 1907	Greensboro, N. C.
General Manager of Production, Carolina Steel and Iron Co.		
FRED GOODE TUCKER	B.E. 1911	Charlotte, N. C.
Insurance Adjuster		
ISAAC NORRIS TULL	B.E. 1910	Cleveland, Ohio
Electrical Engineer, The McKinney Steel Co.		
JOHN EDWIN TURLINGTON	B.Agr. 1907	Gainesville, Fla.
M.S., Ph.D., Cornell University. Professor of Agronomy, University of Florida, College of Agriculture		
ERNEST CRAIG TURNER	B.S. 1917	Mountain City, Tenn.
County Demonstration Agent		
JOSEPH PLATT TURNER	B.E. 1902	Leaksville, N. C.
Grocer		
WILLIAM HARRISON TURNER	B.E. 1893	Winston-Salem, N. C.
Wholesale Dealer and Manufacturer of Feedstuffs		
JACKSON CORPENING TUTTLE	B.E. 1906	Baltimore, Md.
Industrial Power Department, Consolidated Gas, Electric Light and Power Co.		
NAPOLEON BONAPARTE TYLER	B.S. 1917	Roxobel, N. C.
D.V.M. 1921, Alabama Polytechnic Institute. Veterinarian		
GROVER WILLIAM UNDERHILL	B.S. 1916	Field Station, Chester, Va.
M.S. 1918. Assistant Entomologist, Virginia Crop Pest Commission		
ROBERT PEELE UZZELL	B.Agr. 1906	Goldsboro, N. C.
Farmer and Real Estate Dealer		
PETER VALAER, JR.	B.S. 1906	Washington, D. C.
M. S. 1913, George Washington University. Assistant Chemist, Bureau of Internal Revenue		
LILLIAN LEE VAUGHAN	B.E. 1906	Raleigh, N. C.
Professor of Mechanical Engineering, N. C. State College		
WARNER MINNIEWEATHER VERNON	B.S. 1919	Ames, Iowa
Instructor in Animal Husbandry, Iowa State College		
SOLOMON ALEXANDER VEST	B.S. 1900 (Chem.)	Mount Pleasant, Tenn
B.Agr. 1901. Manager, The S. A. Vest Laboratory		
SYLVESTER MURRAY VIELE	B.E. 1905	Altoona, Pa
Assistant Electrical Engineer, Pennsylvania Railroad		
JOHN LAWRENCE VON GLAHN	B.E. 1908	Spartanburg, S. C
Von Glahn & Talbott, Engineers-Contractors		
EDWIN THOMAS WADSWORTH	B.E. 1911	Charlotte, N. C
Member of Firm, Huntley, Bros., Vulcanizers		
JEW IRVIN WAGONER	B.S. 1919	R. 3, Durham, N. C
Agricultural Supervisor, Lowe's Grove Farm Life School		
ROSCOE MARVIN WAGSTAFF	B.E. 1900	Port Richmond, N. Y
Chief Draftsman, Engineering Department, Staten Island Shipbuilding Co.		
JOSEPH KENDALL WAITT	B.E. 1904	Portsmouth, Va
Assistant Valuation Engineer, Seaboard Air Line Railway		
SAMUEL STANHOPE WALKER	B.E. 1919	Martinsville, Va
Overseer of Spinning, Martinsville Cotton Mill Co.		
SUADE GOWER WALKER	B.S. 1918	R. 4, Rutherfordton, N. C
Farmer		
WALTER JENNINGS WALKER	B.E. 1905	Schenectady, N. Y
Electrical Engineer, General Electric Co.		
JOHN DICKSON WALLACE	B.E. 1921	Schenectady, N. Y
Student Engineer, General Electric Co.		
SIDNEY JONES WALTERS	B.E. 1921	Oxford, N. C
Foreman, Robt. G. Lassiter & Co.		
BENJAMIN FRANKLIN WALTON	B.S. 1894	R. 1, Raleigh, N. C
Farmer		
CHARLES EMMETTE WALTON	B.E. 1910	Havana, Cub
Vice President, Dodwells (Cuba) Ltd., Calle Cuba 23		
SETH THOMAS WALTON	B.S. 1920	Columbus, Oh
Student, Veterinary College of Ohio State University		

Name	*Degree*	*Address*
EDMUND FARRIS WARD	B.Agr. 1907	Smithfield, N. C.
Lawyer		
JAMES HUGH WARD, JR.	B.E. 1915	Rocky Mount, N. C.
Member of Firm, J. H. Ward Lumber Co.		
HUGH WARE	B.S. 1899	Kings Mountain, N. C.
Farmer		
JACOB OSBORNE WARE	B.S. 1916	Fayetteville, Ark.
M.S. 1918. In Charge of Cotton Investigations, Agricultural Experiment Station, University of Arkansas		
SYLVESTER HASSELL WARREN	B.S. 1920	Not located
CLARENCE WESTBROOK WARRICK	B.S. 1920	Woodsdale, N. C.
Teacher of Agriculture, Bethel Hill High School		
HENRY CAPERTON WARWICK	B.E. 1918	Washington, D. C.
With U. S. Coast and Geodetic Survey		
CHARLES EDWARD WATSON	B.S. 1921	Jacksonville, N. C.
Principal, Maple Hurst School		
JAMES HUNTER WATSON	B.S. 1911	Raleigh, N. C.
With R. E. Prince, Real Estate and Insurance		
ROBERT PHIFER WATSON	B.E. 1919	Salisbury, N. C.
Overseer (Night) Carding and Spinning, Rowan Cotton Mills Co.		
WALTER WELLINGTON WATT, JR.	B.E. 1905	Charlotte, N. C.
Machinery Salesman and Engineer, With Fred H. White		
JAMES WIGGINS WATTS, JR.	B.E. 1914	Williamston, N. C.
Exhibitor		
HERBERT CARLYLE WEATHERS	B.E. 1921	Raleigh, N. C.
EDWARD HOWERTON WEATHERSPOON	B.E. 1914	New York, N. Y.
Sales Engineer, Chas. Cory & Son, Inc.		
CHARLES WRIGHT WEAVER	B.E. 1914	Asheville, N. C.
Weaver Motor Co.		
LINDSAY MARADE WEAVER	B.E. 1907	Lexington, N. C.
With Wennonah Mills		
GEORGE HENDERSON WEBB	B.E. 1916	Covington, Va.
Civil Engineer, West Virginia Pulp and Paper Co.		
MARION EMERSON WEEKS	B.E. 1904	Seattle, Wash.
321 Highland Drive		
CLEVELAND DOUGLAS WELCH	B.E. 1902	Cramerton, N. C.
Vice President and Agent, Mays Mills, Inc.		
CARL PARKS WELCH	B.S. 1920	Troy, N. C.
Instructor, Vocational Agriculture, Troy High School		
NATHANIEL WARREN WELDON	B.S. 1917	Stovall, N. C.
Principal, Stovall High School		
HOWARD WALDO WELLES	B.E. 1910	Philadelphia, Pa.
Assistant Engineer, Commercial Truck Co.		
JOHN JACKSON WELLS	B.E. 1907	Rocky Mount, N. C.
C.E. 1916. Civil and Consulting Engineer		
ALBERT CLINTON WHARTON	B.S. 1904	Reynolda, N. C.
President and Manager, Reynolda, Inc.		
HARRY GRAVES WHARTON	B.S. 1916	Greensboro, N. C.
Clerk in Postoffice		
FRUID EMMETT WHEELER	B.E. 1917	Camp Grant, Ill.
Captain, 54th Infantry, U. S. Regulars		
FRED BARNETT WHEELER	B.E. 1912	High Point, N. C.
Manager of National Machine Shop		
ALBERT LINWOOD WHITE, JR.	B.E. 1920	Hampton, Va.
Draftsman, Newport News Shipbuilding and Dry Dock Co.		
BUXTON WHITE	B.S. 1915	Elizabeth City, N. C.
Buxton White Seed Co.		
DAVID LYNDON WHITE	B.Agr. 1907	Trinity, N. C.
Farmer		
JONATHAN WINBORNE WHITE	B.S. 1903	State College, Pa.
M.S. 1912, University of Illinois. Professor of Soil Technology, Pennsylvania State College		

Name	*Degree*	*Address*
PERCY STANLEY WHITE	B.S. 1918	Wooster, Ohi
Ohio Agricultural Experiment Station		
ROYALL EDWARD WHITE	B.E. 1908	Aulander, N. C
Practising Engineer		
JOSEPH SLAUGHTER WHITEHURST	B.E. 1909	Lake Wales, Fla
Assistant Cashier, Lake Wales State Bank		
GEORGE WHITSON	B.E. 1917	Columbia, S. C
Switchman, Southern Bell Telephone and Telegraph Co.		
LEVI ROMULUS WHITTED	B.S. 1896	Santa Fe, New Mexic
C.E. 1897. Superintendent of Construction, U. S. Public Buildings Treasury Department		
DUNCAN ALEXANDER WICKER	B.E. 1921	Durham, N. C
State Highway Commission		
FREDERICK CARL WIGGINS	B.S. 1915	Kansas City, Mo
Representative, B. P. S., Patterson-Sargent Co.		
ARCHIE CARRAWAY WILKINSON	B.E. 1905	Chattanooga, Tenn
Senior Engineer, I. C. C. Valuation Bureau		
ATTICUS MORRIS WILLIAMS	B.S. 1921	R. 1, Franklinton, N. C
Farmer		
BELTON CUNDIFF WILLIAMS	B.S. 1919	Raleigh, N. C
Assistant Chemist, State Department of Agriculture		
CHARLES BURGESS WILLIAMS	B.S. 1893	Raleigh, N. C
M.S. 1896. Vice Director and Chief of Division of Agronomy, N. C. Agricultural Experiment Station. Dean of Agriculture, State College		
CLAUDE B. WILLIAMS	B.S. 1899	Elizabeth City, N. C
Physician		
HENRY LLOYD WILLIAMS	B.S. 1896	Cofield, N. C
General Manager of Mills, Cofield Manufacturing Co.		
JAMES HARLEY WILLIAMS	B.E. 1906	Bozeman, Montan
B.A S. 1910, Y. M. C. A. College, Chicago, Ill. General Secretary Y. M. C. A.		
JOHN C. WILLIAMS	B.E. 1908	Norfolk, V
Chief Draftsman, Seaboard Air Line Railway		
JOHN FRANCIS WILLIAMS	B.S. 1917	Buffalo, N. Y
Ind. Alcohol and Chem. Division, Bureau of Internal Revenue		
JOHN FRANKLIN WILLIAMS	B.E. 1916	Charlotte, N. C
With Southern Power Co.		
JOHN HENRY WILLIAMS	M.S. 1920	Raleigh, N. C
Teacher in Raleigh High School		
JOHN RODMAN WILLIAMS	B.E. 1915	Burkeville, V
Pastor of Burkeville Presbyterian Church		
PETER MCK. WILLIAMS, JR.	B.S. 1916	R. 7, Fayetteville, N. C
M.S. 1917. Farmer		
ROBERT EDGAR WILLIAMS, JR.	B.E. 1921	Wilmington, N. C
Assistant Engineer, N. C. State Highway Commission		
ROY LEE WILLIAMSON	B.E. 1917	Weldon, N. C
Resident Engineer, N. C. State Highway Commission		
ALVIN CHESLEY WILSON	B.E. 1913	Baltimore, M
Electrical Engineer, Davison Chemical Co.		
ARTHUR JOHN WILSON	B.S. 1907	Crawfordsville, In
M.S. 1908; Ph.D. 1911, Cornell University. Professor of Chemistry, Wabash College		
JOHN MCCAMY WILSON	B.E. 1894	Not locat
JOHN SPICER WILSON	B.E. 1909	Winston-Salem, N. C
Consulting Electrical Engineer		
DAVID CARLYLE WINDLEY	B.S. 1921	Raleigh, N. C
Milk Tester, Extension Worker, Animal Industry Division		
WALTER BOOKER WINFREE	B.S. 1911	R. 2, Wadesboro, N. C
Farmer		
EDWARD LEIGH WINSLOW	B.E. 1910	Truxillo, Honduras, C.
Contractor and Engineer		
HERMAN ELTON WINSTON	B.E. 1916	Enfield, N. C
With R. L. Swain Tobacco Co., Inc.		
LEWIS TAYLOR WINSTON	B.Agr. 1906	Big Stone Gap, V
Chief Clerk, Auditing Department, Stonega Coke and Coal Co., Inc.		

Name	*Degree*	*Address*
THOMAS HUTCHINSON WINSTON	B.E. 1914	Philadelphia, Pa.
Manufacturers Direct Agent, 1107 Real Estate Building		
HOWARD WISWALL	B.E. 1895	Asheville, N. C.
Civil Engineer and Timber Man		
JAMES HARVEY WITHERS, JR.	B.S. 1916	R. 1, Broadway, N. C.
Farmer		
HENRY KOLLOCK WITHERSPOON	B.E. 1915	Raleigh, N. C.
Engineer in Charge, Publications and Statistics, State Highway Commission		
PAUL ADAMS WITHERSPOON	B.E. 1909	Pittsburgh, Pa.
C.E. 1911, Lehigh University. Assistant Engineer, Carnegie Coal Co.		
LOUIS ERNEST WOOTEN	B.E. 1917	Raleigh, N. C.
Assistant Professor in Civil Engineering, N. C. State College		
DANIEL BARNES WORTH	B.E. 1920	Raleigh, N. C.
Instructor in Mechanical Engineering Department, N. C. State College		
OWEN ZELOTES WRENN	B.E. 1914	Charlotte, N. C.
Southern Engineering Co.		
BENJAMIN VAIDEN WRIGHT	B.E. 1901	Laurel, Miss.
With Gilchrist-Fordney Lumber Co.		
SAMUEL KING WRIGHT	B.E. 1920	Raleigh, N. C.
Real Estate		
MARION FULLER WYATT	B.E. 1911	Raleigh, N. C.
With Job P. Wyatt & Sons Co.		
ROBERT JOB WYATT	B.E. 1909	Raleigh, N. C.
Treasurer, Job P. Wyatt & Sons Co.		
FORREST EGAN WYSONG	B.E. 1915	New York, N. Y.
President, Cable Cord Corporation		
CHARLES GARRETT YARBOROUGH	B.E. 1895	Los Angeles, Calif.
District Service Manager, Westinghouse Electric and Manufacturing Co.		
LOUIS THOMAS YARBOROUGH	B.E. 1893	Raleigh, N. C.
Postoffice Inspector, Headquarters, Washington, D. C.		
WOODFIN BRADSHER YARBOROUGH	B.E. 1908	Morenci, Arizona
Chief Electrician, Phelps-Dodge Corporation		
JAMES FULLER YATES	B.E. 1918	Massillon, Ohio
Engineer, Ohio Public Service Co.		
ELMER BERNARD YOUNG	B.E. 1921	Raleigh, N. C.
Designer, Bridge Department, N. C. State Highway Commission		
HARRY CURTIS YOUNG	M.S. 1915	East Lansing, Mich.
Research Associate in Botany, Michigan Agricultural College		
ROBERT CLEVELAND YOUNG	B.S. 1920	Red Oak, N. C.
Principal, Red Oak High School		
SAMUEL MARVIN YOUNG	B.E. 1893	Raleigh, N. C.
Traveling Salesman, Watkins-Cottrell Company of Richmond, Va.		
THOMAS GRADY YOUNG	B.E.(Elec.) 1920	Logan, W. Va.
B.E.(C.E.) 1921. With Kentucky and West Virginia Power Co.		
OTIS ALLEN ZACHARY	B.E. 1921	Duke, N. C.
With The Erwin Cotton Mills Co.		
YARO ZENISHEK	B.E. 1917	New York, N. Y.
238 West 28th St.		
JOHN FRANKLIN ZIGLAR	B.E. 1908	Charlotte, N. C.
C.E. 1915. Maintenance of Way Department, Southern Railway		
CARLE CLARK ZIMMERMAN	M.S. 1921	Raleigh, N. C.
A.B. 1920, Missouri University. Instructor Rural Life, N. C. State College		

DECEASED GRADUATES

Thomas Martin Ashe	B.E. 1895	Robert Lee Morgan	B.E. 1910
Edward Par Bailey	B.E. 1904	Frank Bullock Morton	B.E. 1914
John Isham Blount	B.E. 1895	Henry Kollock Nash, Jr.	B.S. 1914
Henry Emil Bonitz	B.E. 1893	B. Moore Parker	B.S. 1898
Guy Kedar Bryan	B.E. 1911	Alexander Holladay Pickell	B.E. 1912
Joel W. Bullock	B.Agr. 1905	James Hicks Peirce	B.S. 1905
Robert Hill Carter	B.E. 1907	Hugh Williams Primrose	B.S. 1897
Summey Crouse Cornwell	B.E. 1903	Zebbie George Rogers	B.E. 1894
William Pescud Craig	B.S. 1901	Carl DeWitt Sellers	B.E. 1893
Edwin Speight Darden	B.S. 1895	Charles Edgar Seymore	B.S. 1893
George Maslin Davis	B.E. 1901	William Thomas Shaw, Jr.	B.E. 1914
William Kearney Davis	B.E. 1895	Orin Morrow Sigmon	B.E. 1911
Jacob Tatum Eaton	B.Agr. 1907	Charlie Augustine Speas	B.E. 1911
Rutledge Hughes Feild	B.S. 1915	John Francis Speight	B.E. 1910
John Daniel Ferguson	B.E. 1903	Hugh Stuart Steele	B.E. 1909
Nevin Gould Fetzer	B.S. 1912	William Anderson Syme	B.S. 1899
Hugh Pierce Foster	B.E. 1903	Zebulon Whitehurst Taylor	B.E. 1914
Francis Marion Foy	B.S. 1899	Frank Martin Thompson	B.E. 1910
Charles Duffy Francks	B.E. 1893	Buxton Williams Thorne	B.E. 1893
Ransom Eaton Gill	B.E. 1910	Charles Edward Trotter	B.S. 1903
Roy Joseph Gill	B.E. 1907	Reid Tull	B.E. 1906
John Howard Glenn	B.E. 1903	Clyde Loreine Vann	B.E. 1914
Emil Gunter	B.E. 1903	Steven Dockery Wall	B.E. 1905
Samuel Merrill Hanff	B.S. 1900	Charles Augustus Watson	B.S. 1901
George Rom Hardesty	B.E. 1907	Jordan Lea Watson	B.S. 1897
Thomas Frederick Haywood	B.E. 1909	Will Miller Watson	B.E. 1915
Robert Irving Howard	B.E. 1902	James Thaddeus Weatherly	B.S. 1918
Arthur Templeton Kenyon	B.E. 1905	Cecil Bernard Whitehurst	B.E. 1907
James Heritage Koonce	B.E. 1905	Edwin Seymour Whiting	B.E. 1903
Joe Poindexter Lovill	B.E. 1906	Gaither Hall Whiting	B.S. 1900
James William McKoy	B.E. 1893	Bradley Jewett Wooten	B.S. 1897

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